Serviceanweisung
Service manual

MSC 330

RT

CD

SC

PA

Diese Service-Unterlage wurde ausschließlich für autorisiertes Fachpersonal erstellt.
Für Eingriffe durch nicht autorisierte Personen übernimmt der Hersteller keine Haftung.

This service manual was only made for authorized specialists.
For interventions by not authorized persons producer doesn't take possession of liability.

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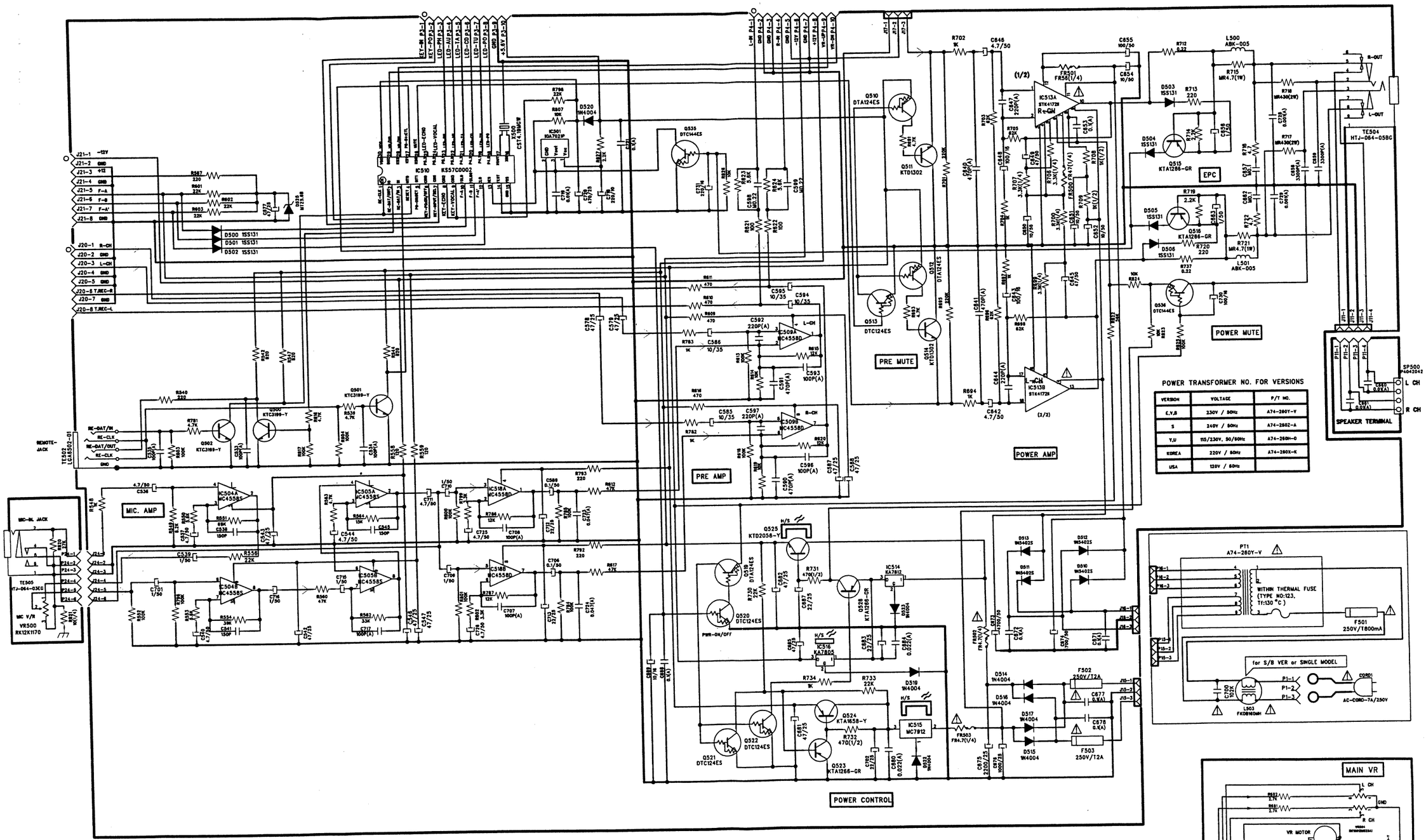
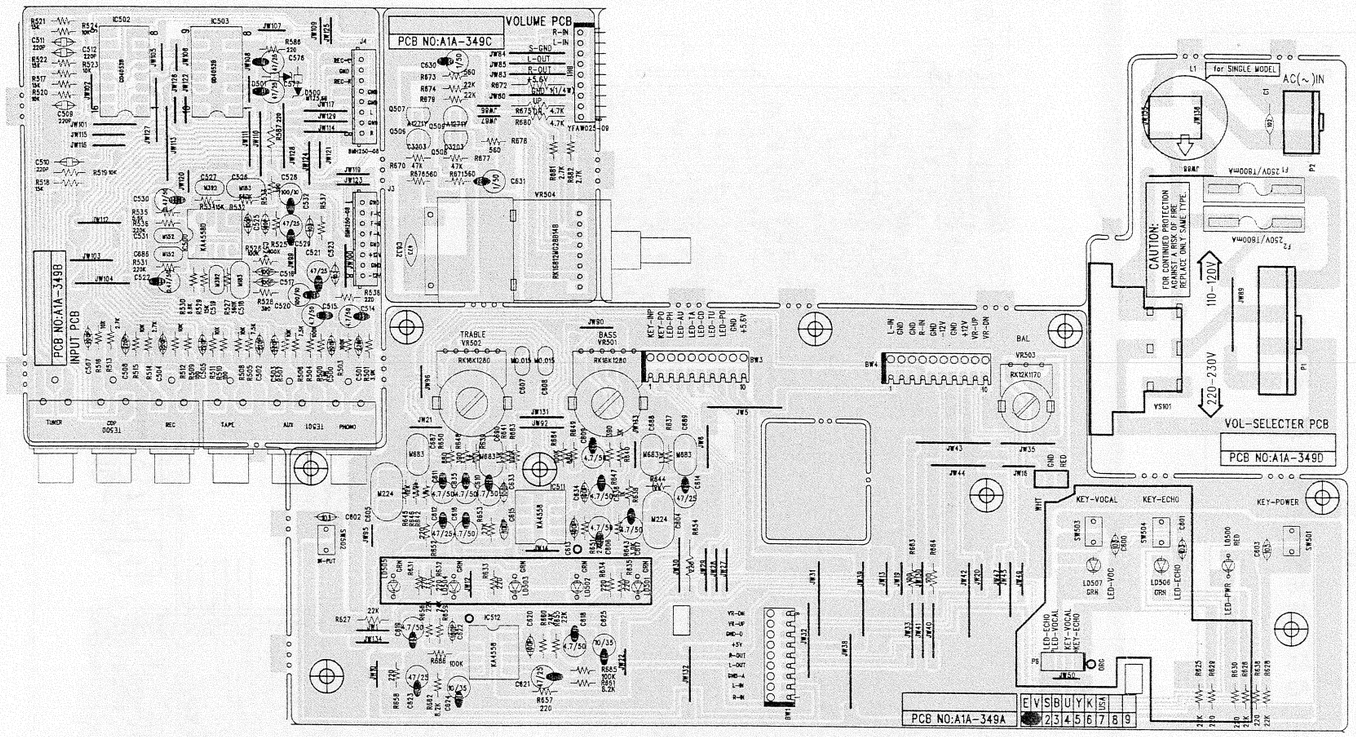
Schaltbild Verstärker (PA)
Schematic diagram amplifier (PA)

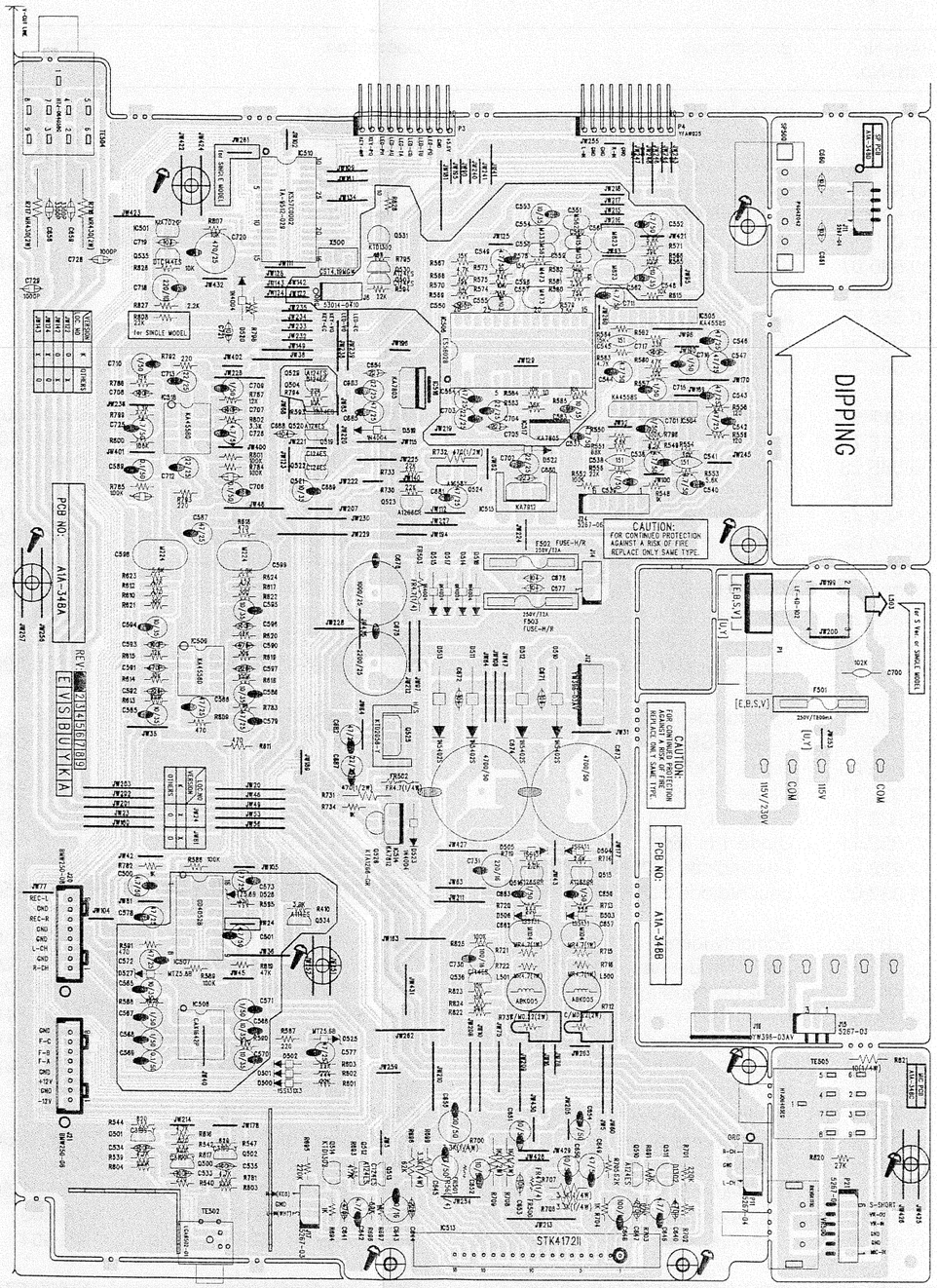


Achtung: Nur Original-Ersatzteile gewährleisten die Betriebssicherheit des Gerätes.
Note: Original spare parts only guaranty electrically safe operation of the set.

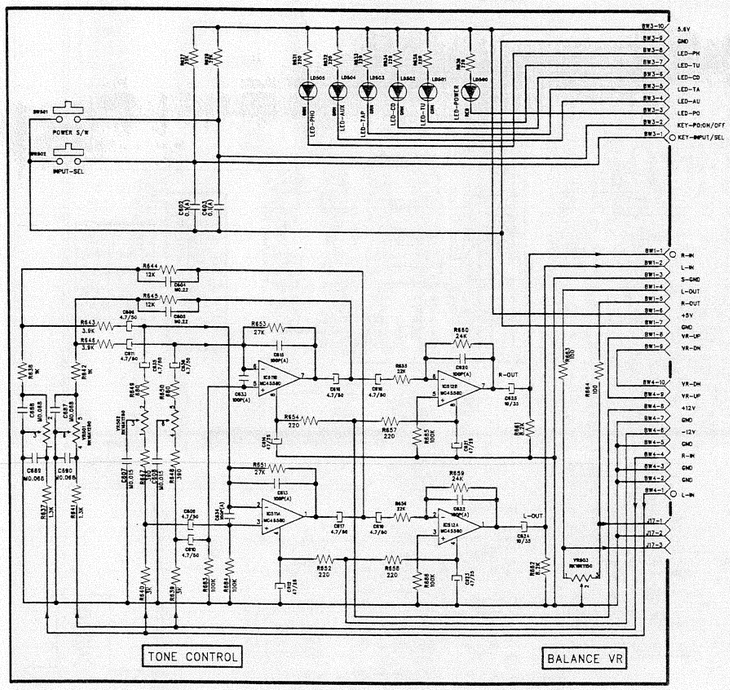
Frontplatine Verstärker (PA)
Front P.C. board amplifier (PA)



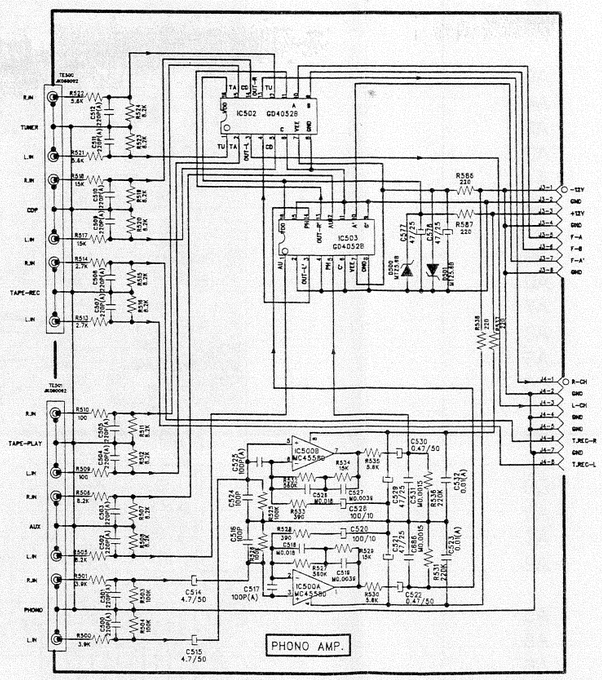
Grundplatine Verstärker (PA)
Main P.C. board amplifier (PA)



Schaltbild Klangregelung (PA)
Schematic diagram tone control (PA)



Schaltbild Phono-Vorverstärker (PA)
Schematic diagram phono amplifier (PA)



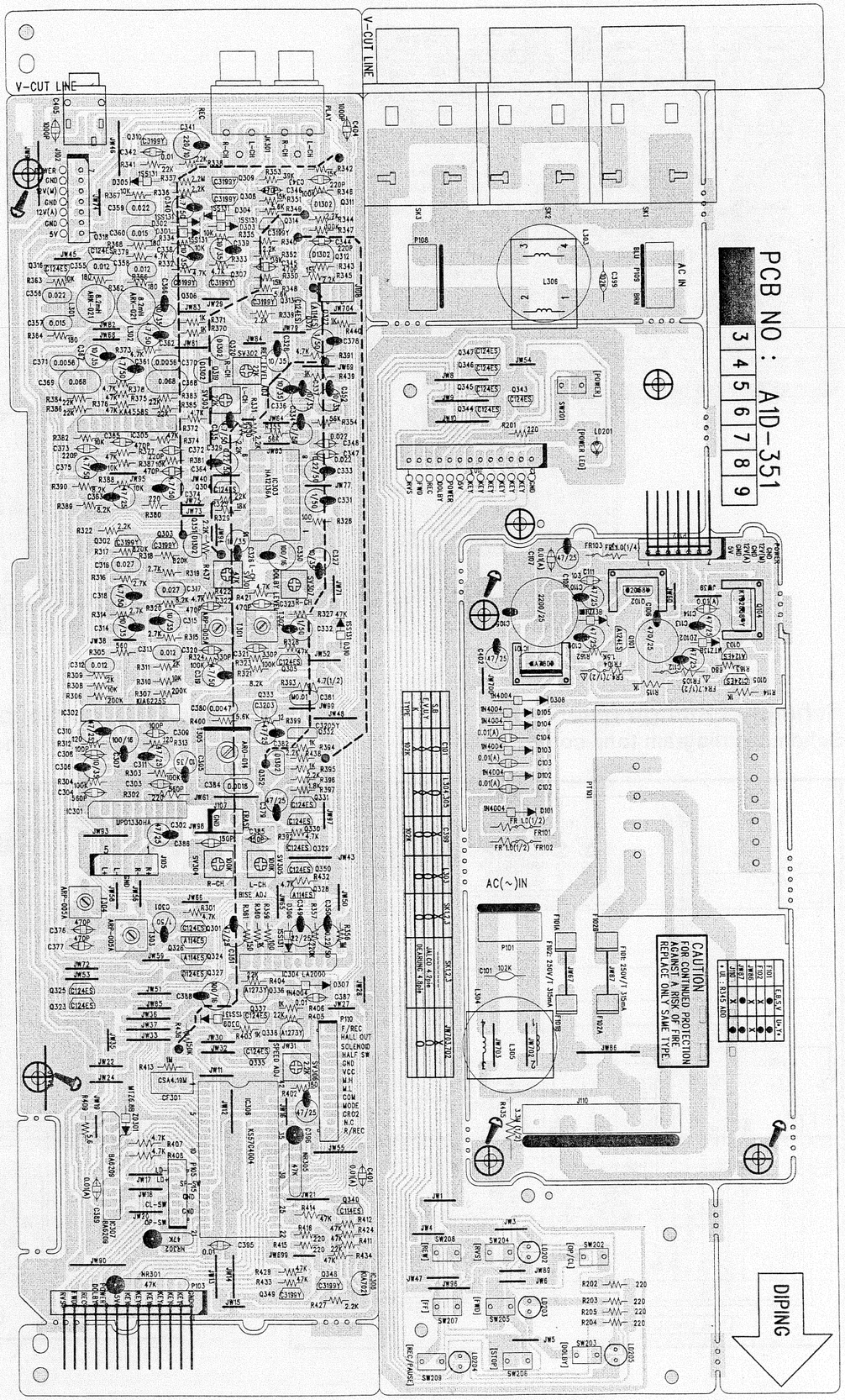
Ersatzteilliste elektrische Teile – Verstärker MSC 330 PA

Spare parts list electrical parts – amplifier MSC 330 PA

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
00 585 07	IC KA 4558 C	IC KA 4558 C	IC 500	A5
01 022 99	IC KIA 7021 P/F	IC KIA 7021 P/F	IC 501	A3
00 656 03	IC GD 4052 B	IC GD 4052 B	IC 502-503	B1
00 584 74	IC KA 4558 S	IC KA 4558 S	IC 504-505	A5
00 585 07	IC KA 4558 C	IC KA 4558 C	IC 509, 518	A5
01 023 00	IC KS 57C0002-S3 (TA 9512-029)	IC KS 57C0002-S3 (TA 9512-029)	IC 510	B5
00 585 07	IC KA 4558 C	IC KA 4558 C	IC 511-512	A5
00 585 06	IC STK 4172 II	IC STK 4172 II	IC 513	D1
00 585 77	IC KA 7812	IC KA 7812	IC 514	A6
01 037 04	IC KA 7912	IC KA 7912	IC 515	A3
00 584 75	IC KA 7805	IC KA 7805	IC 516	A6
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 500-502	A6
00 655 70	Transistor KTC 3203	Transistor KTC 3203	Q 506, 508	A3
00 585 23	Transistor KTA 1271 Y	Transistor KTA 1271 Y	Q 507, 509	A3
00 577 02	Transistor DTA 124 E-S	Transistor DTA 124 E-S	Q 510, 512, 519	A0
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 511, 514	A3
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 513, 520-522	A3
00 655 64	Transistor KTA 1266 GR	Transistor KTA 1266 GR	Q 515-516	A5
00 655 64	Transistor KTA 1266 GR	Transistor KTA 1266 GR	Q 523, 526	A5
12 926 23	Transistor KTA 1658 Y	Transistor KTA 1658 Y	Q 524	A3
00 652 37	Transistor KTD 2058 Y	Transistor KTD 2058 Y	Q 525	A5
00 374 00	Transistor DTC 144 E-S	Transistor DTC 144 E-S	Q 535-536	A3
00 060 40	Zenerdiode MTZ 5,6 V	Zenerdiode MTZ 5.6 V	D 525	A3
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 501-506	A2
00 585 25	Diode 1 N 5402 S	Diode 1 N 5402 S	D 510-513	A2
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 514-517	A4
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 519-520	A4
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 522-523	A4
12 923 40	Leuchtdiode SLR-34VC3 rot	LED SLR-34VC3 red	LD 500	A4
01 037 05	Leuchtdiode SLR-305MCA47 grün	LED SLR-305MCA47 green	LD 501-505	A4
00 101 82	Schichtwiderstand 1K ½W	Resistor 1K ½W	R 708-709	A0
00 585 28	Zementwiderstand R22 2W	Cement resistor R22 2W	R 712, 737	A4
00 401 32	Schichtwiderstand 470R ½W	Resistor 470R ½W	R 731-732	A2
00 388 35	Metal-Oxid-Widerstand 4R7 1W	Metal oxyd resistor 4R7 1W	R 715-716	A3
01 037 08	Metal-Oxid-Widerstand 430R 2W	Metal oxyd resistor 430R 2W	R 717-718	A1
00 388 35	Metal-Oxid-Widerstand 4R7 1W	Metal oxyd resistor 4R7 1W	R 721-722	A3
00 655 86	Sicherungswiderstand 47R ¼W	Fuse resistor 47R ¼W	FR 500	A1
00 461 57	Sicherungswiderstand 56R ¼W	Fuse resistor 56R ¼W	FR 501	A9
12 737 85	Sicherungswiderstand 4R7 ¼W	Fuse resistor 4R7 ¼W	FR 502-503	A0
00 585 32	Drehwiderstand 50K (Mic.Mix)	Rotary resistor 50K (mic)	VR 500	A7
01 037 09	Drehwiderstand 20K x 2 (Bass/Tr.)	Rotary resistor 20K x 2 (bass/tr.)	VR 501-502	A8
12 926 32	Drehwiderstand 100K (Balance)	Rotary resistor 100K (bal.)	VR 503	A5
01 037 10	Drehwiderstand 100K x 2 m. Motor	Rotary resistor 100K x 2 motor	VR 504	C5
01 037 11	Elko rad. 4700µF/50V 26x41	Elko 4700µF/50V 26x41	C 673-674	B3
00 602 30	Keramikschwingkreis CST 4,19 MGW	Resonator CST 4.19 MGW	X 500	A7
01 037 12	Netztrafo TA 990 A74-260X-K	Power transformer TA 990 A74-..		D9
01 037 13	Taster EVQ 21505R-K	Tact switch EVQ 21505R-K	SW 501-502	A0
00 017 03	Sicherung T 2 A / 250 V	Fuse T 2 A / 250 V	F 502-503	A1
01 030 20	Sicherung T 800 mA / 250 V	Fuse T 800 mA / 250 V	F 501	A2
00 585 38	Cinchbuchse 6-fach rot/weis	Socket RCA 6 pin red/white	TE 500-501	A9
01 037 57	Klinkenbuchse 3,5 mm 2-fach grün	Socket RCA 3.5 mm green	TE 502	A8
01 037 58	Klinkenbuchse 6,3 mm Kopfh.	Socket phone 6.3 mm phone	TE 504	A6
00 585 41	Klinkenbuchse 6,3 mm Mic.	Socket phone 6.3 mm mic.	TE 505	A5
01 037 59	Klemmanschluß LS 4-fach	Speaker terminal 4-pin	SP500	A8

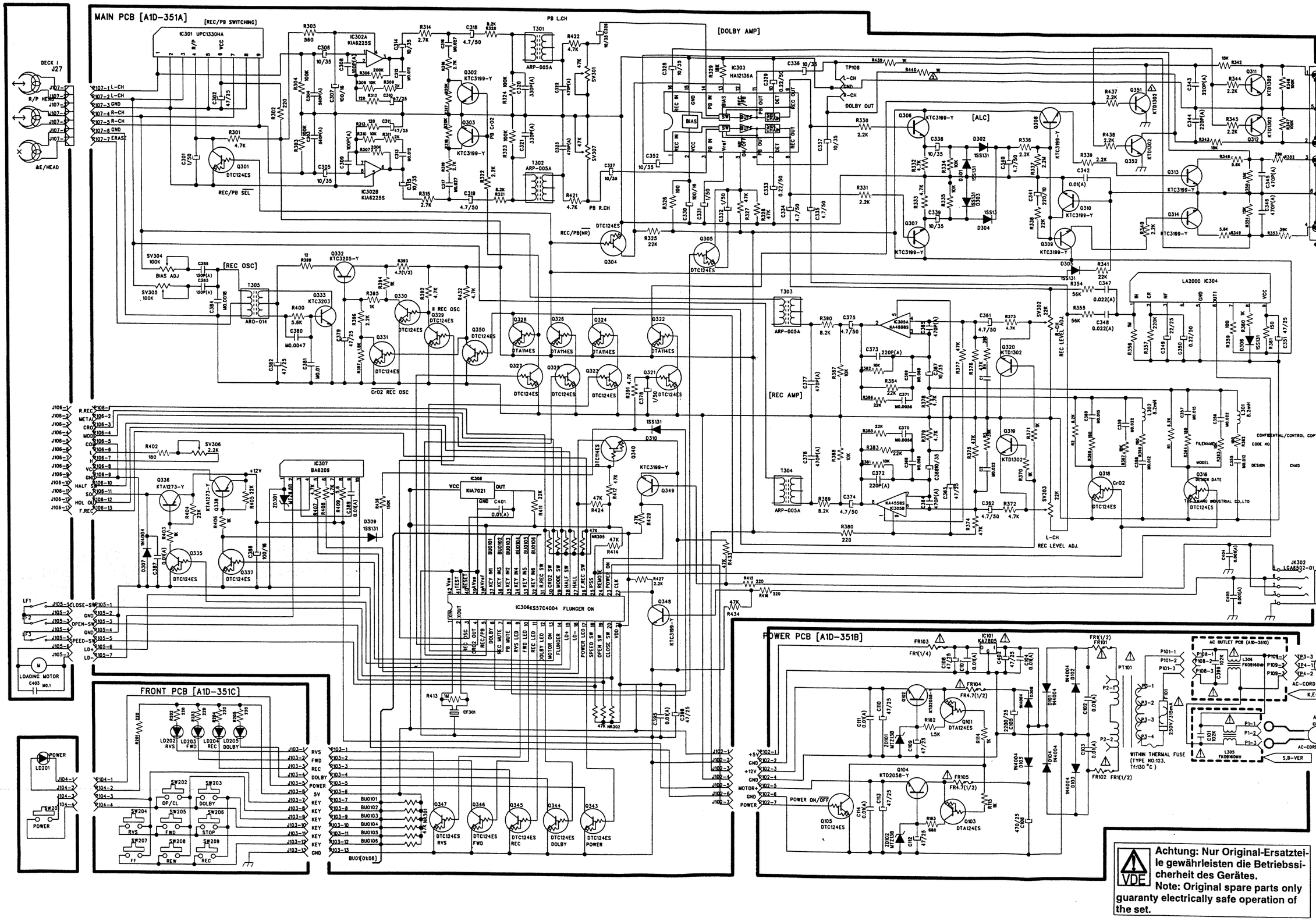
Platinendarstellung Cassettendeck (SC)

P.C. board diagram cassette deck (SC)



Schaltbild Cassettendeck (SC)

Schematic diagram cassette deck (SC)



Abgleichanweisung Cassettendeck (SC)
Alignment instructions cassette deck (SC)

SCHRITT	ABGLEICHPUNKT
1.	Test-Cassette / Signal IN
2.	Funktionsart
3.	Testpunkt & Abgleichbauteil
4.	Ergebnis (>) & Hinweis (*)

STEP	ADJUSTMENT ITEM
1.	Test tape / Signal INPUT
2.	Mode
3.	Test point & Adjustment Part
4.	Result & Remarks

Testpunkt
Test point

Abgleichbauteil
Adjustment part

Hinweise:

1. Vor dem Abgleich die Köpfe und Bandführungsteile reinigen und entmagnetisieren.
2. Dolby NR ausschalten.
3. Folgende Testcassetten sind zu verwenden:
   NORMAL: TDK AC-224
   CrO2: TDK AC-513
4. Line OUT = J 108

Hints:

1. Before adjustment, clean and de-magnetize the heads and tape guides.
2. Set the Dolby NR switch off.
3. Use the following recording test tapes:
   NORMAL: TDK AC-224
   CrO2: TDK AC-513
4. Line OUT = J 108

1	AUFNAHMEPEGEL
1.	Test-Cassette AC-224 / 1kHz, -6,0dBs
2.	Aufnahme > Widergabe
3.	LINE OUT / SV 303 L-K, SV 302 R-K
4.	> AC Millivoltmeter an LINE OUT (TP 401) anschließen * -6dBs (±6dBs)

1	RECORDING LEVEL
1.	Test tape AC-224 / 1kHz, -6.0dBs
2.	Record > Play
3.	LINE OUT / SV 303 L-ch, SV 302 R-ch
4.	> Connect an AC milli-voltmeter to LINE OUT (TP 401) * -6dBs (±6dBs)

2	WIDERGABEPEGEL
1.	Test-Cassette MTT-150 / 400Hz
2.	Widergabe
3.	LINE OUT / SV 307 L-K, SV 301 R-K
4.	> AC Millivoltmeter an LINE OUT (TP 401) anschließen * 580mV (-2,5dB)

2	TAPE PB LEVEL
1.	Test tape MTT-150 / 400Hz
2.	Play mode
3.	LINE OUT / SV 307 L-ch, SV 301 R-ch
4.	> Connect an AC milli-voltmeter to LINE OUT (TP 401) * 580mV (-2.5dB)

6	OSZILLATOR-FREQUENZ
1.	Leercassette CrO2
2.	Aufnahme
3.	JW 68
4.	> Frequenzzähler zwischen JW 68 und GND anschließen * 100kHz (±5kHz)

6	BIAS OSCILLATOR FREQUENCY
1.	Blank tape CrO2
2.	Record
3.	JW68
4.	> Connect a frequency counter between JW 68 and GND * 100kHz (±5kHz)

Löschspannung:
CrO2 ca. 65Vss
Normal ca. 50Vss
Vormagnesierungsspannung:
CrO2 ca. 50Vss
Normal ca. 40Vss

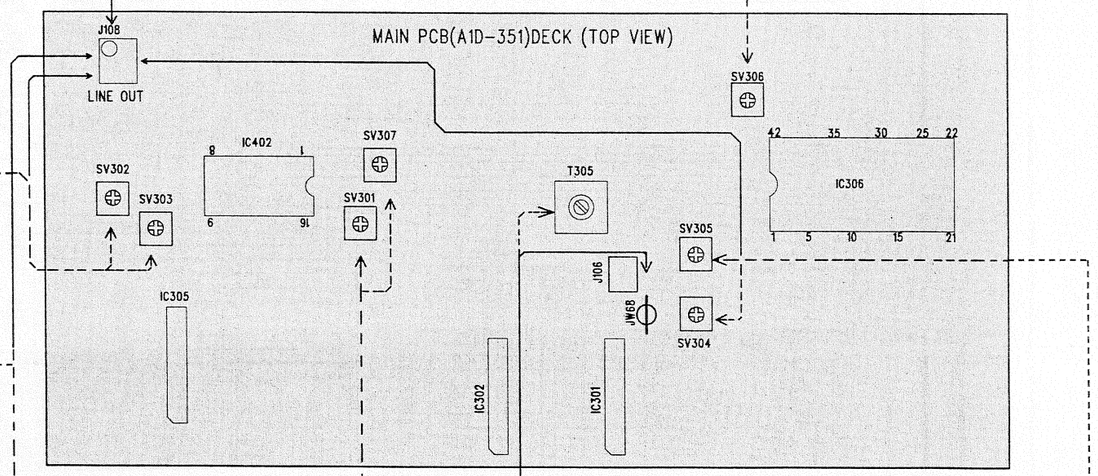
Erase voltage:
CrO2 ca. 65Vss
Normal ca. 50Vss
Magnetize voltage:
CrO2 ca. 50Vss
Normal ca. 40Vss

4	ABGLEICH AZIMUT
1.	Test-Cassette MTT-357G / 10kHz
2.	Widergabe
3.	LINE OUT / Kopfazimutschraube
4.	> AC Millivoltmeter an LINE OUT (TP 401) anschließen * maximales Ausgangssignal

4	HEAD AZIMUTH ALIGNMENT
1.	Test tape MTT-357G / 10kHz
2.	Play
3.	LINE OUT / Head azimuth alignment screw
4.	> Connect an AC milli-voltmeter to LINE OUT (TP 401) * Maximum output level

3	BANDGESCHWINDIGKEIT
1.	Test-Cassette MTT-111DN / 3000Hz
2.	Widergabe
3.	LINE OUT / SV 306
4.	> Frequenzzähler an LINE OUT anschließen * 3000Hz (±60Hz)

3	TAPE NORMAL SPEED
1.	Test tape MTT-111DN / 3000Hz
2.	Play
3.	LINE OUT / SV 306
4.	> Connect a frequency counter to LINE OUT * 3000Hz (±60Hz)



5	ABGLEICH NORMAL BIAS
1.	Test-Cas. AC-224 / 1kHz und 10kHz, -26dBs
2.	Aufnahme > Widergabe
3.	LINE OUT / SV 305 L-K, SV 304 R-K
4.	> AC Millivoltmeter an LINE OUT (TP 401) anschließen * Der Widergabepegel variiert zwischen 1kHz und 10kHz nach der Aufnahme mit ±0.3dB.

5	NORMAL POSITION BIAS
1.	Test tape AC-224 / 1kHz and 10kHz, -26dBs
2.	Record > Play
3.	LINE OUT / SV 305 L-ch, SV 304 R-ch
4.	> Connect an AC milli-voltmeter to LINE OUT (TP 401) * Playback level difference between 1kHz and 10kHz after recording within ±0.3dB.

Ersatzteilliste elektrische Teile – Cassettendeck MSC 330 SC

Spare parts list electrical parts – cassette deck MSC 330 SC

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
00 584 75	IC KA 7805	IC KA 7805	IC 101	A6
00 585 73	IC µPC 1330 HA	IC µPC 1330 HA	IC 301	A6
00 585 72	IC KIA 6225 S	IC KIA 6225 S	IC 302	A5
00 585 75	IC HA 12136 A	IC HA 12136 A	IC 303	A9
00 484 07	IC LA 2000	IC LA 2000	IC 304	C6
00 584 74	IC KA 4558 S	IC KA 4558 S	IC 305	A5
01 037 36	IC KS 57C4004-67 (TD 9512-030)	IC KS 57C4004-67	IC 306	B9
00 295 75	IC BA 6209	IC BA 6209	IC 307	B8
01 022 99	IC KIA 7021 P/F	IC KIA 7021 P/F	IC 308	A3
00 577 02	Transistor DTA 124 E-S	Transistor DTA 124 E-S	Q 101, 103, 105	A0
00 652 37	Transistor KTD 2058 Y	Transistor KTD 2058 Y	Q 102, 104	A5
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 301, 304, 305	A3
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 302-303	A6
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 306-310	A6
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 311-312	A3
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 313-314	A6
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 316, 318	A3
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 319-320	A3
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 321, 323, 325	A3
12 865 70	Transistor DTA 114 E-S	Transistor DTA 114 E-S	Q 322, 324, 326	A4
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 327, 329-331	A3
12 865 70	Transistor DTA 114 E-S	Transistor DTA 114 E-S	Q 328	A4
00 584 49	Transistor KTC 3205 Y	Transistor KTC 3205 Y	Q 332	A3
00 655 70	Transistor KTC 3203	Transistor KTC 3203	Q 333	A3
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 335, 337	A3
00 573 23	Transistor KTA 1273 Y	Transistor KTA 1273 Y	Q 336, 338	A6
00 327 62	Transistor DTC 114 E-S	Transistor DTC 114 E-S	Q 340	A6
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 343-347, 350	A3
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 348-349	A6
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 351-352	A3
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 101-105	A4
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 301-306	A2
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 307-308	A4
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 309-310	A2
00 377 58	Zenerdiode MTZ 13 V	Zenerdiode MTZ 13 V	ZD 101-102	A1
00 349 89	Zenerdiode MTZ 6,8 V	Zenerdiode MTZ 6,8 V	ZD 301	A2
12 923 40	Leuchtdiode SLR-34VC3 rot	LED SLR-34VC3 red	LD 201	A4
12 754 55	Leuchtdiode SLR-54GC3 grün	LED SLR-54GC3 green	LD 202-203, 205	A3
12 872 42	Leuchtdiode SLR-54VC3 rot	LED SLR-54VC3 red	LD 204	A0
01 037 37	Widerstands-Netzwerk 47Kx7	Network resistor 47Kx7	NR 301	A1
01 037 50	Widerstands-Netzwerk 47Kx4	Network resistor 47Kx4	NR 302	A1
01 037 51	Widerstands-Netzwerk 47Kx6	Network resistor 47Kx6	NR 305	A1
00 039 70	Schichtwiderstand 4R7 ½W	Resistor 4R7 ½W	R 393	A0
12 917 79	Sicherungswiderstand 1R ½W	Fuse resistor 1R ½W	FR 101-102	A0
00 185 76	Sicherungswiderstand 1R ¼W	Fuse resistor 1R ¼W	FR 103	A2
00 486 02	Sicherungswiderstand 4R7 ½W	Fuse resistor 4R7 ½W	FR 104-105	A1
01 037 52	Trimmpoti 47K	Semi fixed resistor 47K	SV 301, 307	A3
00 296 22	Trimmpoti 22K	Semi fixed resistor 22K	SV 302, 303	A3
00 663 13	Trimmpoti 100K	Semi fixed resistor 100K	SV 304, 305	A3
12 913 21	Trimmpoti 2K2	Semi fixed resistor 2K2	SV 306	A3
00 602 30	Keramikschwingkreis CST 4,19 MGW	Resonator CST 4.19 MGW	CF 301	A7
01 037 38	Spule ARK-021 8,2 mH (Rec chock)	Coil ARK-021 8.2 mH	L 301-302	A3
01 037 39	Spule LF-4D-102 102 µH (Audio ch.)	Coil LF-4D-102 102 µH	L 303	A8

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 037 40	Spule ARP 005 A 100 kHz (Rec trap)	Coil ARP 005 A 100 kHz	T 301-304	A4
00 652 52	Spule ARO 014 85 kHz (Rec osc)	Coil ARO 014 85 kHz	T 305	A4
01 037 41	Netztrafo TD 990 A48-263Y-V	Power transformer TD 990 A48-..		C2
01 037 13	Taster EVQ 21505R-K	Tact switch EVQ 21505R-K	SW 201-209	A0
00 012 07	Sicherung T 315 mA / 250 V	Fuse T 315 mA / 250 V	F 101	A2
12 837 15	Cinchbuchse 4-fach	Socket RCA 4-pin	JK 301	A4
01 037 60	Klinkenbuchse 3,5 mm 1-fach	Socket phone 3.5 mm	JK 302	A7
01 037 42	Netzbuchse Ausgang	AC outlet	Netz (3)	B1

Ersatzteilliste mechanische Teile – Cassettendeck MSC 330 SC

Spare parts list mechanical parts – cassette deck MSC 330 SC

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 037 71	Cassetten-Mechanik kpl. mit Slider	Cassette deck ass'y w. slider		F5
01 037 72	Cassetten-Mechanik ADR 2122 TB	Cassette logic deck ADR 2122 TB		E4
12 918 22	Sensor-/Hall-IC	Hall IC		
01 037 73	Motor Slider	Motor slider		B4
01 037 74	Pulley Slidermotor	Pulley motor		A3
01 037 75	Riemen Slider	Belt pulley		A7
01 037 76	Riemen-/Zahnrad	Gear pulley		A5
01 037 77	Ladezahnrad	Gear base		A4
01 037 78	Schlitten (Slider)	Slider tray		B2
01 037 79	Auflage Cassette	Tray cassette		A7
01 037 80	Ladeplatte mit Zahnschiene	Table load		B0
01 037 81	Schalthebel Slider	Lever Stop		A0
01 037 82	Feder Schalthebel	Spring lever		A0
01 037 83	Niederhalter	Clamper		A7
01 037 84	Feder Niederhalter	Spring cassette		A7
01 037 85	Schalter Slider-Ende MLS-1 16V/1A	Switch U MLS-1 16V/1A		A5
01 037 86	Schalter Slider herausen/unten	Switch U MSS-8B		A5

Achtung:
Die Cassettenmechnik ist nur als komplettes Ersatzteil lieferbar.
Für den Slider sind nur die oben angegebenen Ersatzteile lieferbar.

Attention:
The cassette mechanism is only as whole kit available.
For the slider are only the above mentioned spare parts available.

DOLBY B NR

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DOLBY und das Doppel-D-Symbol ◻◻ sind Warenzeichen der Dolby Laboratories Licensing Corporation.

DOLBY B NR

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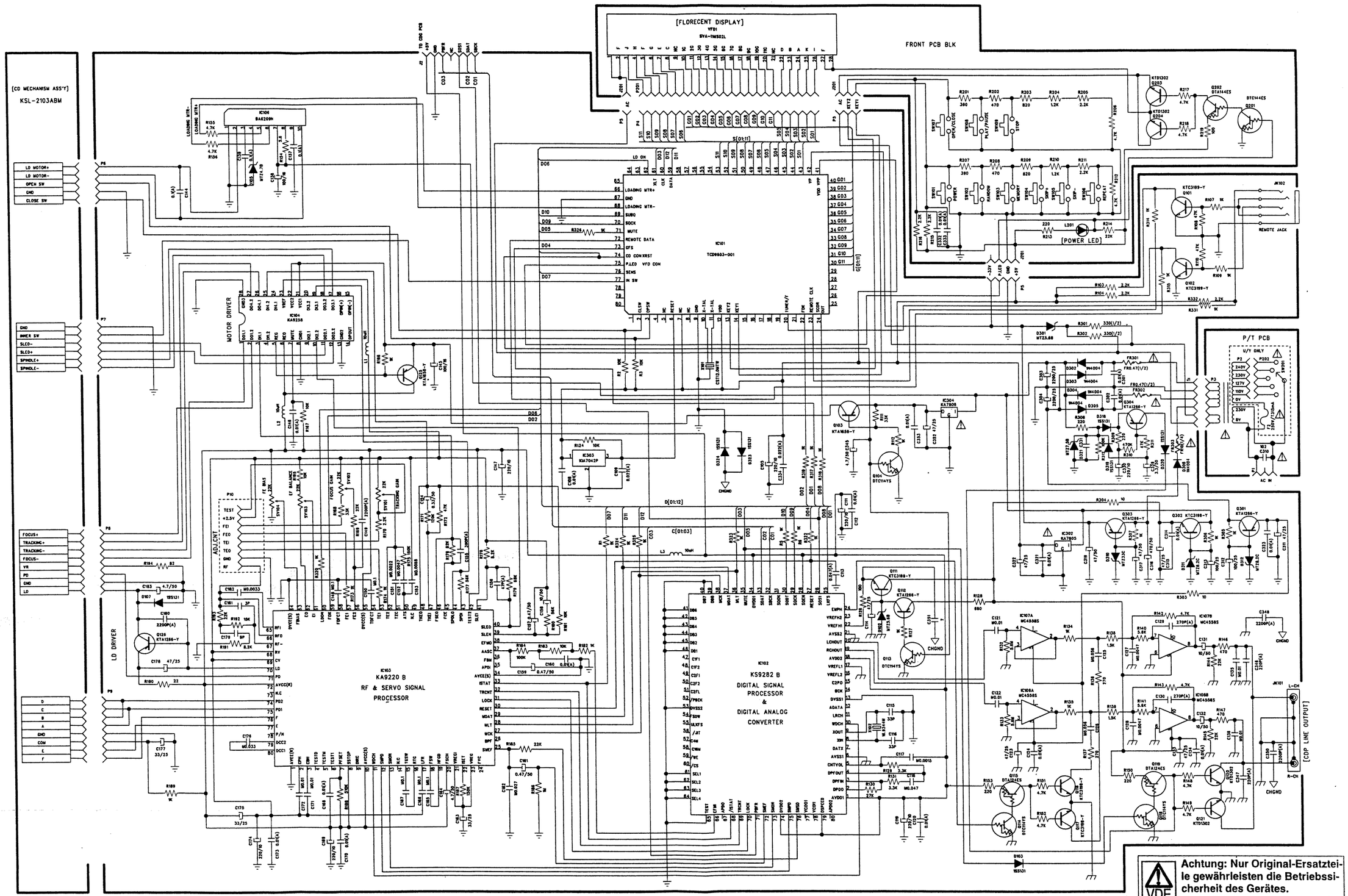
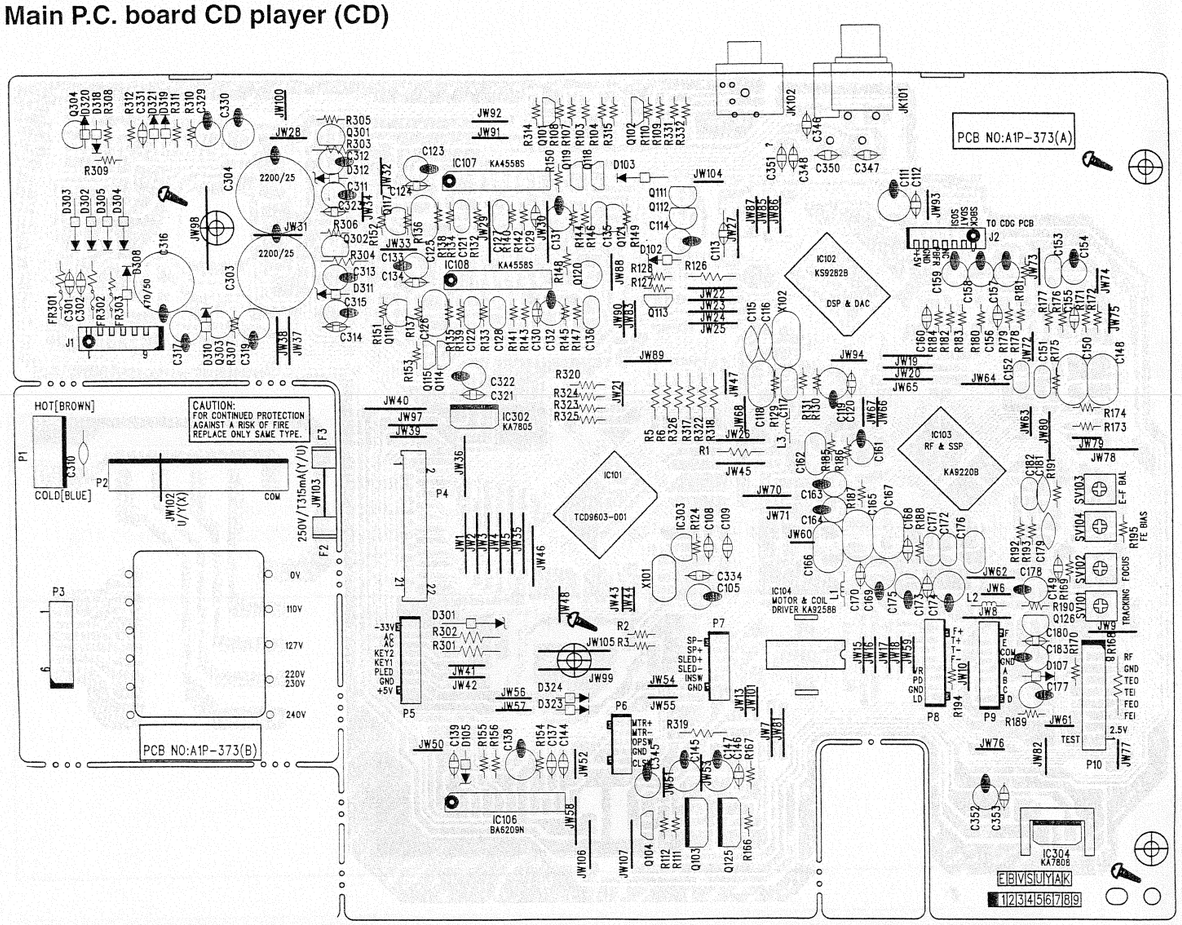
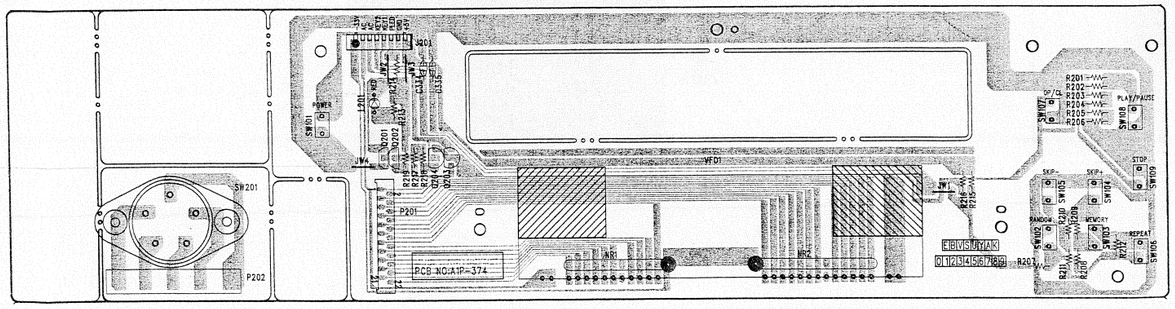
Schaltbild CD Spieler (CD)
Schematic diagram CD player (CD)


[CD MECHANISM ASS'Y]
KSL-2103ABM
LD MOTOR+
LD MOTOR-
OPEN SW
GND
CLOSE SW
GND
INNER SW
SLED-
SLED+
SPINDLE+
SPINDLE-
FOCUS+
TRACKING+
TRACKING-
FOCUS-
VR
PD
GND
LD
D
C
B
A
GND
COM
E
F
[FLORECENT DISPLAY]
VFD1
SYA-1NE02L
FRONT PCB BLK
[POWER LED]
REMOTE JACK
[CDP LINE OUTPUT]
L-CH
R-CH
AC IN
P/T PCB
U/V ONLY
IC101
TCD9603-001
IC102
KS9282 B
DIGITAL SIGNAL PROCESSOR & DIGITAL ANALOG CONVERTER
IC103
KA9220 B
RF & SERVO SIGNAL PROCESSOR
IC104
KA9258
MOTOR DRIVER
LD DRIVER
ADJ.CNT
TEST
+2.5V
FD
FEO
TEI
TEO
GND
RF
IC106
BA6209N
LOADING MTR+
LOADING MTR-
IC303
KIA7042P
IC304
KA7805
IC302
KA7805
IC107A
MC4558S
IC107B
MC4558S
IC108A
MC4558S
IC108B
MC4558S
Q101 KTC3199-Y
Q102 KTC3199-Y
Q103 KTA1658-Y
Q104 DTC114TS
Q111 KTC3198-Y
Q112 KTA1266-Y
Q113 DTC114YS
Q115 DTA124ES
Q116 DTC114YS
Q117 KTC3198-Y
Q118 DTC114YS
Q119 DTA124ES
Q121 KTB1302
Q201 KTB1302
Q202 DTA144ES
Q203 KTB1302
Q204 KTB1302
Q301 KTA1266-Y
Q302 KTC3198-Y
Q303 KTA1266-Y
D101 DTC144ES
D301 MTZ5.6B
D302 1N4004
D303 1N4004
D304 1N4004
D305 1N4004
D306 KTA1266-Y
D307 1SS131
D308 1SS131
D309 1SS131
D310 1SS131
D311 MTZ8.2C
D312 MTZ8.2C
D313 MTZ27.0B
D314 MTZ5.6B
D315 1SS131
D316 1SS131
D317 MTZ33C
D318 1SS131
D319 1SS131
D320 1SS131
D321 1SS131
D322 1SS131
D323 1SS131
D324 1SS131
D325 1SS131
D326 1SS131
D327 1SS131
D328 1SS131
D329 1SS131
D330 1SS131
D331 1SS131
D332 1SS131
D333 1SS131
D334 1SS131
D335 1SS131
D336 1SS131
D337 1SS131

Grundplatine CD Spieler (CD)
Main P.C. board CD player (CD)



Frontplatine CD Spieler (CD)
Front P.C. board CD player (CD)



Ersatzteilliste elektrische Teile – CD Spieler MSC 330 CD
Spare parts list electrical parts – CD player MSC 330 CD

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 037 46	IC TCD 9603-001	IC TCD 9603-001	IC 101	D0
12 925 10	IC KS 9282 B	IC KS 9282 B	IC 102	E1
01 037 47	IC KA 9220 B	IC KA 9220 B	IC 103	C2
00 598 89	IC KA 9258 D	IC KA 9258 D	IC 104	C3
00 295 75	IC BA 6209 N	IC BA 6209 N	IC 106	B8
00 584 74	IC KA 4558 S	IC KA 4558 S	IC 107, 108	A5
00 584 75	IC KA 7805	IC KA 7805	IC 302	A6
00 584 47	IC KIA 7042 P/F	IC KIA 7042 P/F	IC 303	A4
01 028 31	IC KA 7808	IC KA 7808	IC 304	A4
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 101, 102	A6
12 926 23	Transistor KTA 1658 Y	Transistor KTA 1658 Y	Q 103, 125	A3
00 576 99	Transistor DTC 114 Y-S	Transistor DTC 114 Y-S	Q 104	A0
00 655 65	Transistor KTC 3198 Y	Transistor KTC 3198 Y	Q 111, 116, 117	A3
00 655 64	Transistor KTA 1266 Y	Transistor KTA 1266 Y	Q 112, 126	A5
00 576 99	Transistor DTC 114 Y-S	Transistor DTC 114 Y-S	Q 113, 114, 118	A0
00 577 02	Transistor DTA 124 E-S	Transistor DTA 124 E-S	Q 115, 119	A0
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 120, 121	A3
00 374 00	Transistor DTC 144 E-S	Transistor DTC 144 E-S	Q 201	A3
00 327 63	Transistor DTA 144 E-S	Transistor DTA 144 E-S	Q 202	A2
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 203, 204	A3
12 912 20	Transistor KTA 1266 Y	Transistor KTA 1266 Y	Q 301, 303, 304	A5
12 912 18	Transistor KTC 3198 Y	Transistor KTC 3198 Y	Q 302	A3
00 349 42	Zenerdiode MTZ 5,6 V	Zenerdiode MTZ 5.6 V	D 102	A3
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 103, 107	A2
00 617 41	Zenerdiode MTZ 4,7 V	Zenerdiode MTZ 4.7 V	D 105	A0
00 349 42	Zenerdiode MTZ 5,6 V	Zenerdiode MTZ 5.6 V	D 301	A2
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 302-305, 308	A4
00 382 45	Zenerdiode MTZ 33 V	Zenerdiode MTZ 33 V	D 310	A1
00 602 09	Zenerdiode MTZ 8,2 V	Zenerdiode MTZ 8.2 V	D 311, 312	A2
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 318-320	A2
00 377 57	Zenerdiode MTZ 7,5 V	Zenerdiode MTZ 7.5 V	D 321	A2
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 323-324	A2
12 923 40	Leuchtdiode SLR-34VC3 rot	LED SLR-34VC3 rot	L 201	A4
00 618 27	Schichtwiderstand 330R ½W	Resistor 330R ½W	R 301-302	A0
00 655 76	Sicherungswiderstand R47 ½W	Fuse resistor R47 ½W	FR 301-302	A2
00 230 47	Sicherungswiderstand 10R ¼W	Fuse resistor 10R ¼W	FR 303	A2
00 296 22	Trimmpoti 22K	Semi fixed resistor 22K	SV 101-104	A3
01 037 23	Keramikschwingkreis CST 12,0 MTW	Resonator CST 12.0 MTW-TF01	X 101	A4
00 407 69	Quarz 16,9344 MHz	Crystal 16.9344 MHz	X 102	B2
01 037 48	Netztrafo TCD 991 A54-280Y-V	Power transformer TCD 991 A54-..		C3
01 037 13	Taster EVQ 21505R-K	Tact switch EVQ 21505R-K	SW 101-109	A0
01 037 49	Display CD	Display CD	VFD 1	D3
01 037 53	Cinchbuchse 2-fach steh.	Socket RCA 2 pin	JK 101	A4
01 037 57	Klinkenbuchse 2-fach grün	Socket RCA 2 pin	JK 102	A8
00 590 01	CD-Mechanik kpl.	CD mechanism ass'y		F1

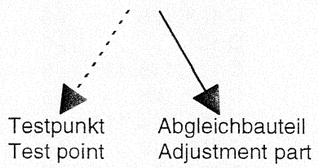
Achtung:
Die CD-Mechanik ist nur als komplettes Ersatzteil lieferbar.

Attention:
The CD mechanism ist only as whole kit available.

Abgleichanweisung CD Spieler (CD)
Alignment instructions CD player (CD)

SCHRITT	ABGLEICHPUNKT
1.	Test-CD
2.	CD-Funktionsart
3.	Testpunkt & Abgleichbauteil
4.	Ergebnis (>) & Hinweis (*)

STEP	ADJUSTMENT ITEM
1.	Test disc
2.	Mode
3.	Test point & Adjustment Part
4.	Result & Remarks

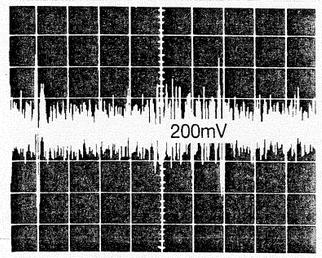


4 TRACKING SERVO

1. Test-CD A-BEX TCD-781 oder Sony TYPE 3
2. Widergabe
3. IC 103 Pin 48 / SV 101
4. > Oszilloskop zwischen IC 103 Pin 48 und GND anschließen
   * 200 mV

4 TRACKING SERVO GAIN

1. Test disc A-BEX TCD-781 or Sony TYPE 3
2. Play mode
3. IC 103 48pin / SV 101
4. > Connect an oscilloscope to the IC 103 48pin and GND
   * 200 mV

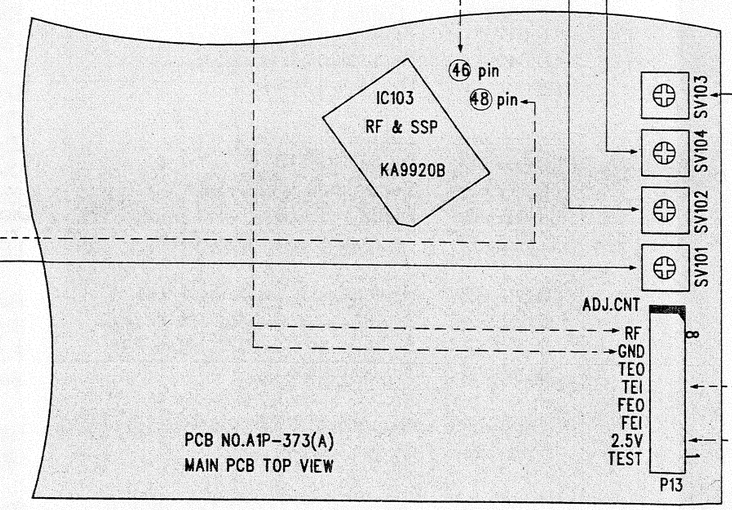


1 FOCUS BIAS

1. Test-CD A-BEX TCD-781 oder Sony TYPE 3
2. Widergabe
3. P13 (Pin 7 und 8) / SV 104
4. > Oszilloskop zwischen RF und GND anschließen, Play-Taste drücken und HF-Signal auf Maximum abgleichen
   * 1,2 Vss - 1,4 Vss

1 FOCUS BIAS

1. Test disc A-BEX TCD-781 or Sony TYPE 3
2. Play mode
3. P13 (7- and 8pin) / SV 104
4. > Connect an oscilloscope to the RF and GND, press PLAY button and adjust the RF signal to maximum
   * 1,2 Vpp to 1,4 Vpp

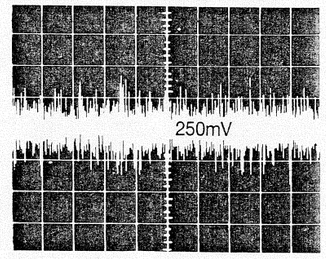


3 FOKUS SERVO

1. Test-CD A-BEX TCD-781 oder Sony TYPE 3
2. Widergabe
3. IC 103 Pin 46 / SV 102
4. > Oszilloskop zwischen IC 103 pin 46 und GND anschließen
   * 250 mV

3 FOCUS SERVO

1. Test disc A-BEX TCD-781 or Sony TYPE 3
2. Play mode
3. IC 103 46pin / SV 102
4. > Connect an oscilloscope to the IC 103 46pin and GND
   * 250 mV

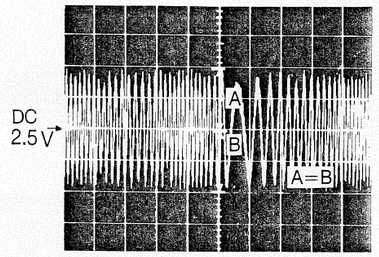


2 E-F BALANCE

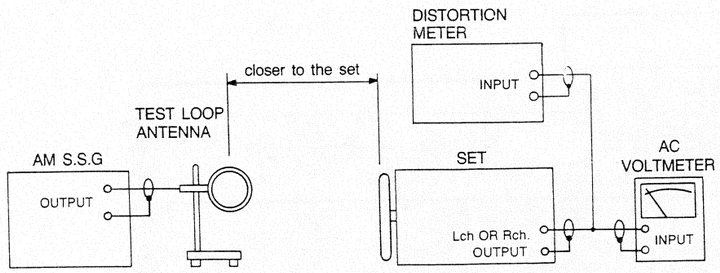
1. Test-CD A-BEX TCD-781 oder Sony TYPE 3
2. Widergabe
3. P13 (Pin 2 und 5) / SV 103
4. > Oszilloskop zwischen TEO/TE1 und GND anschließen
   > Pin 1 und 2 von P13 kurzschließen, mit SV 103 abgleichen, Kurzschluß entfernen
   * A = B

2 E-F BALANCE

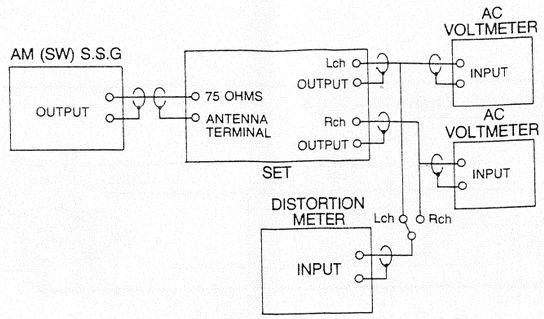
1. Test disc A-BEX TCD-781 or Sony TYPE 3
2. Play mode
3. P13 (2- and 5pin) / SV 103
4. > Connect an oscilloscope to TEO/TE1 and GND
   > Short 1- and 2pin of P13 while adjusting with SV 103, remove the short
   * A = B



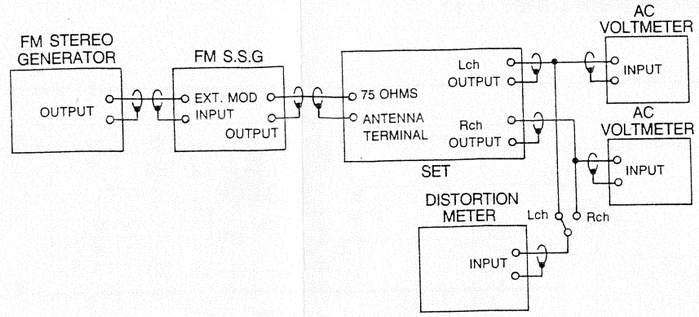
Abgleichanweisung Tuner (RT)
Alignment instructions tuner (RT)



Instrument connection for AM (MW, LW) section adjustment



Instrument connection for AM (SW) section adjustment



Instrument connection for FM section adjustment

NOTE:1.Set the S.S.G. to 1KHz, 75KHz deviation for [U], [S], [B], [Y], [V2] or [E] model, 1KHz, 40KHz deviation for [V1] model.

STEP	ADJUSTMENT
	1. TEST CONDITIONS
	2. MODE
	3. CHECK POINT, ADJUSTMENT PART
	4. REMARK(●) and RESULT(＊)

Test Point — Adjustment Part

LW

NOTE: 1. Set the S.S.G to 1KHz, 30% modulation on each adjustment.

1 LW OSC

1. –
2. 144KHz (preset 11ch)
3. T204
4. ● Connect the Digital DC Voltmeter between JW3 and GND.
   ＊1.3V ± 0.1V

2 LW SENSITIVITY

1. LOW-160KHz, 70dBμ (PRESET 12ch)
   High-260KHz, 70dBμ
2. LOW-160KHz PRESET 12ch
   High-260KHz PRESET 14ch
3. T202
4. ● Connect the milli-Voltmeter to OUTPUT
   ＊Maximum output level and minimum distortion
   ＊For best result repeat Low and High adjustment several times.

FM

3 DISTORTION(STEREO)

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz
3. IFT (FRONT END) (FE201)
4. ● Connect the distortion meter to LINE OUT.
   ＊Minimum Distortion(TP301)

1 CENTER VOLTAGE

1. 98.0MHz, 60dBμ (MONO)
2. 98.0MHz (PRESET 3ch)
3. T206
4. ● Connect the DC Digital Voltmeter to both ends of J1.
   ＊± 50mV for "0" VOLT

2 TUNED DISPLAY

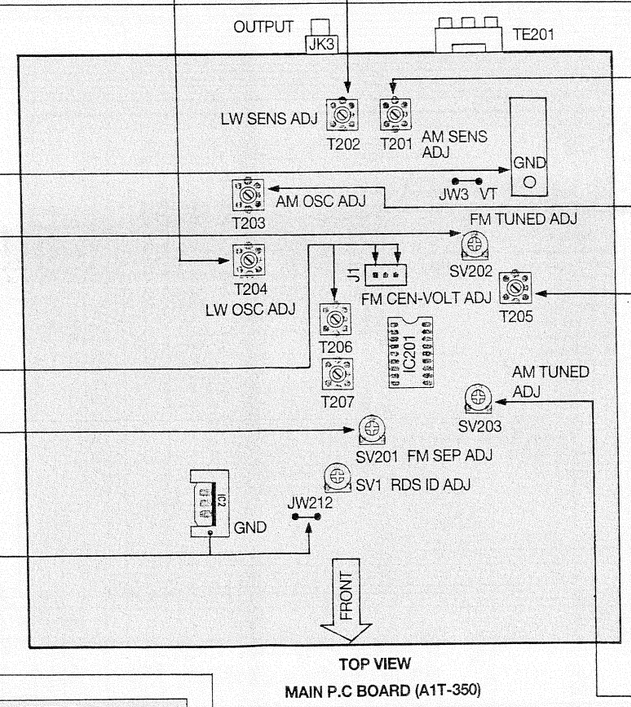
1. 98.0MHz, 18dBμ (MONO)
2. 98.0MHz (MONO, preset 3ch)
3. Tuning LED on the front panel. SV202
4. ＊TUNED DISPLAY is lit.

4 STEREO SEPARATION

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz, PRESET 3ch
3. SV201
4. ● Connect the milli-voltmeter to OUTPUT.
   ＊Minimum output level for opposite channel.

5 RDS ID LEVEL ADJUSTMENT

1. 98.0MHz, 35dBμ (RDS 2.0K DEV)
2. 98.0MHz (preset 3ch)
3. SV1
4. ● Connect the DC Digital Voltmeter to both ends of JW212
   ＊ADJUST SV1 UNTILL LOW LEVEL("0" VOLT)
   JW212



TOP VIEW

MAIN P.C BOARD (A1T-350)

AM

NOTE: Set the S.S.G to 1KHz 30% modulation on each adjustment.

2 AM(MW) SENSITIVITY

1. 603KHz, 60dBμ (LOW) or 1,404KHz, 60dBμ
2. 603KHz(LOW), PRESET 9ch
3. T201
4. ● Connect the milli-Voltmeter to OUTPUT
   ＊Maximum output level and minimum distortion.
   ＊For best result repeat Low a High adjustments several times.

1 AM(MW) OSC

1. –
2. 531KHz(PRESET 6ch)
3. T203
4. ● Connect the Digital DC Voltmeter to between JW3 and GND.
   ＊1.3V + 0.1V

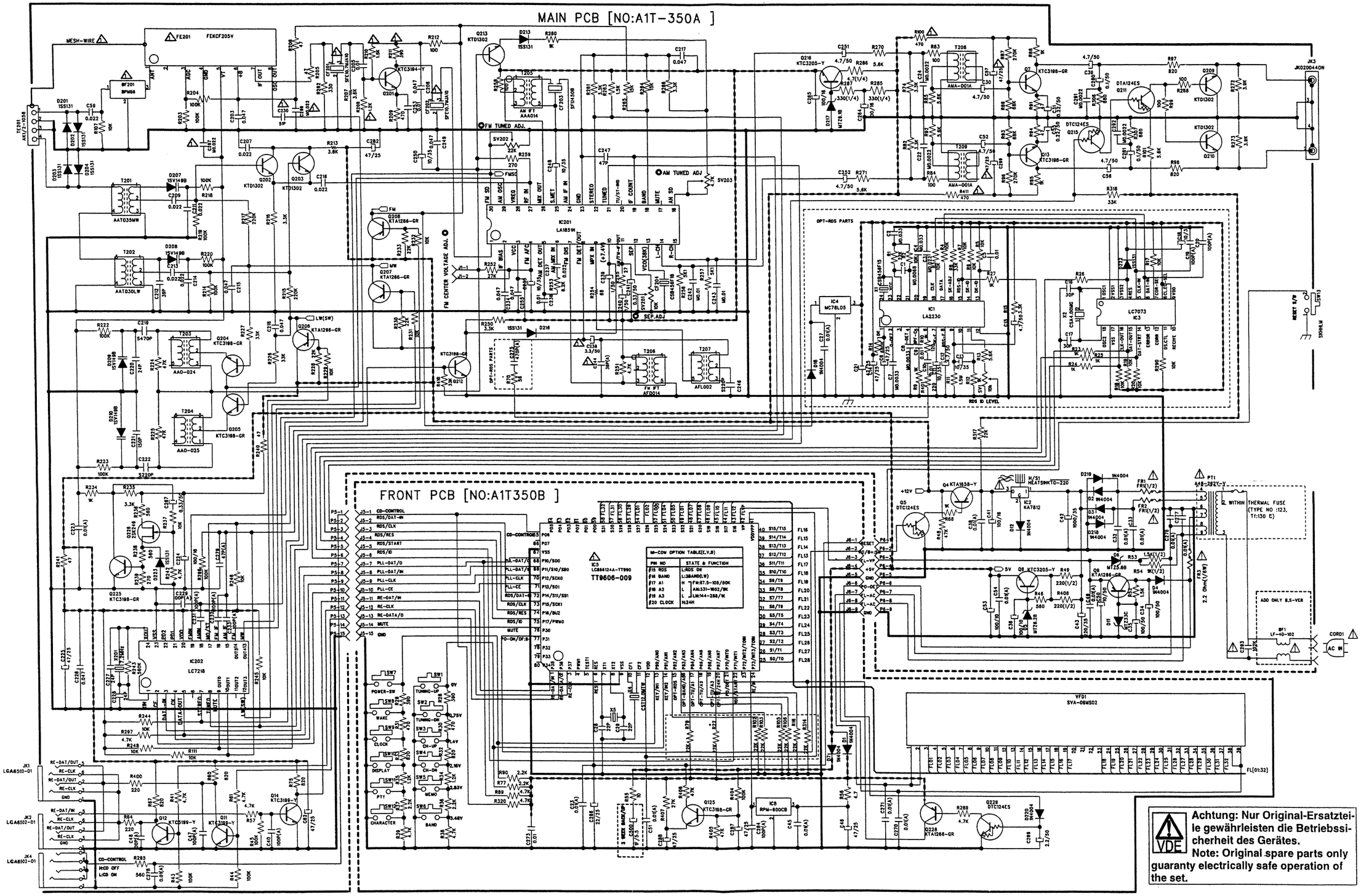
3 AM IF

1. 603KHz, 60dBμ
2. 603KHz
3. T205
4. ● Connect the milli-Voltmeter to OUTPUT.
   ＊Maximum output level.

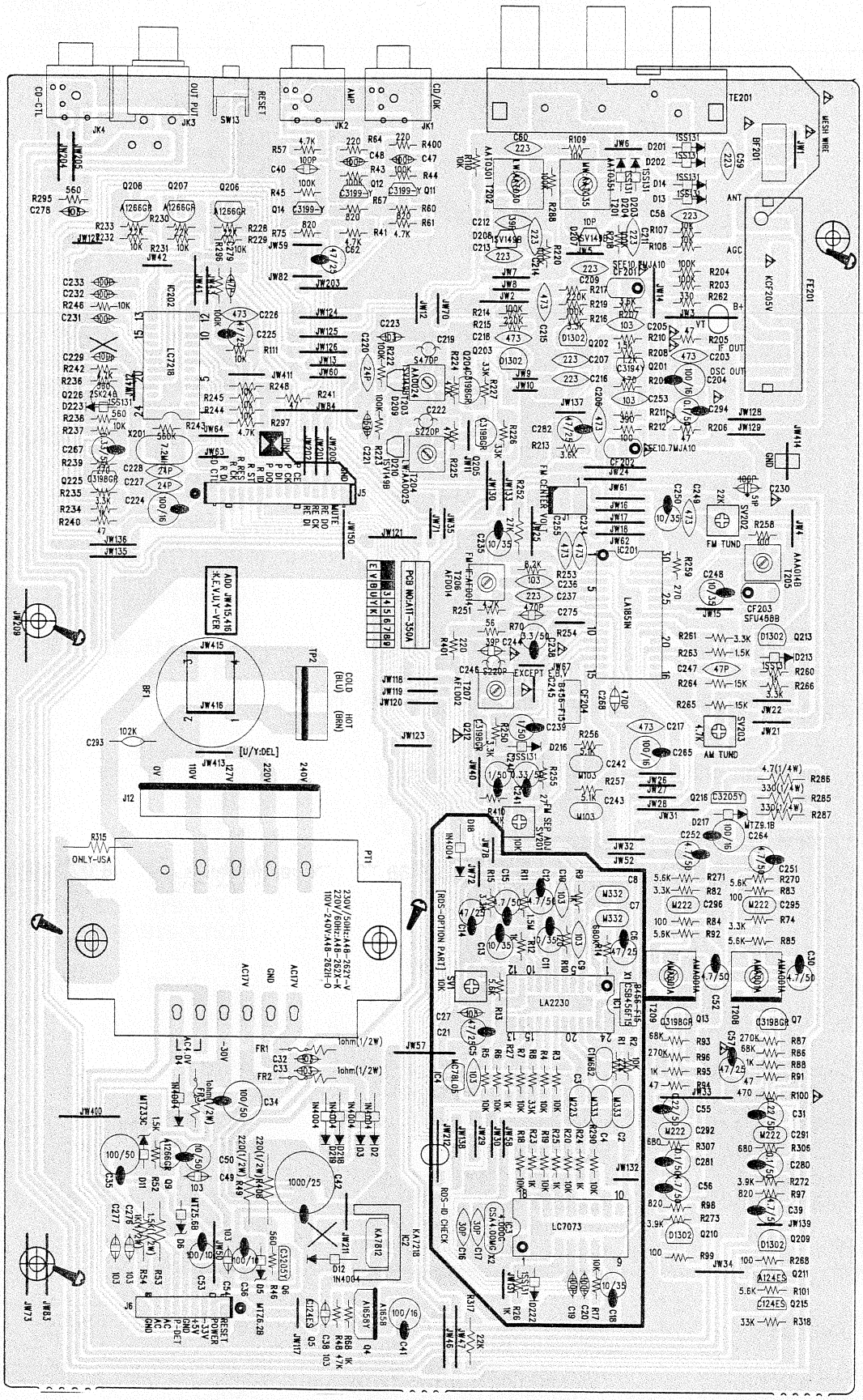
4 TUNED DISPLAY

1. 603KHz, 60dBμ
2. 603KHz
3. Tuned display on the front Panel.
4. ＊Tuning LED is lit. SV203

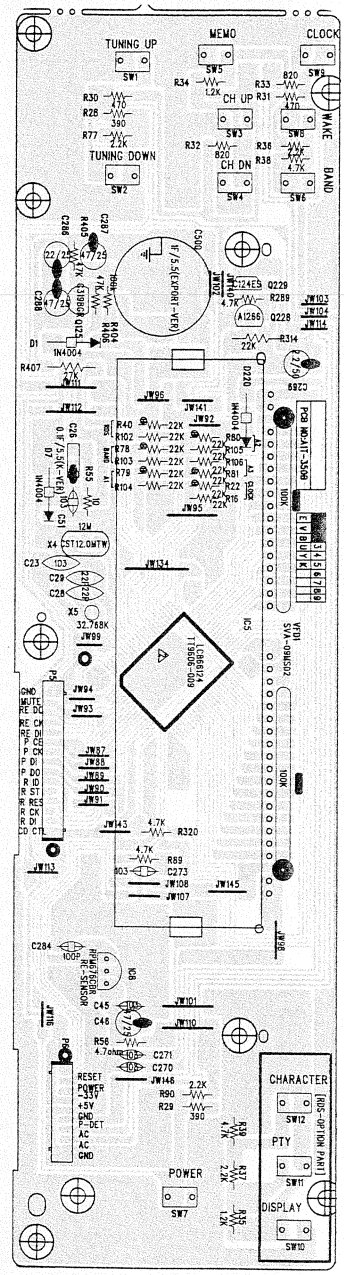
Schaltbild Tuner (RT)
Schematic diagram tuner (RT)



Grundplatine Tuner (RT)
Main P.C. board tuner (RT)



Frontplatine Tuner (RT)
Front P.C. board tuner (RT)



Ersatzteilliste elektrische Teile – Tuner MSC 330 RT

Spare parts list electrical parts – tuner MSC 330 RT

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 037 21	IC TT 9606-009 QIP80 (LC 86 P 6132)	IC TT 9606-009 QIP80	IC 1	D0
00 570 65	IC LA 2230	IC LA 2230	IC 1 (RDS)	C8
00 585 77	IC KA 7812	IC KA 7812	IC 2	A6
12 925 03	IC LC 7073	IC LC 7073	IC 3	D0
00 584 75	IC KA 78 L 05	IC KA 78 L 05	IC 4	A6
12 925 12	IC RPM 676 CBR-L (IR-Empfänger)	IC RPM 676 CBR-L (IR receiver)	IC 8	B9
00 658 71	IC LA 1851 N	IC LA 1851 N	IC 201	C2
00 584 45	IC LC 7218	IC LC 7218	IC 202	A5
12 926 23	Transistor KTA 1658 Y	Transistor KTA 1658 Y	Q 4	A3
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 5	A3
00 584 49	Transistor KTC 3205 Y	Transistor KTC 3205 Y	Q 6	A3
00 655 65	Transistor KTC 3198 GR	Transistor KTC 3198 GR	Q 7	A3
00 655 64	Transistor KTA 1266 GR	Transistor KTA 1266 GR	Q 9	A5
12 917 57	Transistor KTC 3199 Y	Transistor KTC 3199 Y	Q 11, 12, 14	A6
00 655 65	Transistor KTC 3198 GR	Transistor KTC 3198 GR	Q 13, 125	A3
00 652 38	Transistor KTC 1923 Y (3194)	Transistor KTC 1923 Y	Q 201	A2
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 202-203	A3
00 655 65	Transistor KTC 3198 GR	Transistor KTC 3198 GR	Q 204-205, 225	A3
00 655 64	Transistor KTA 1266 GR	Transistor KTA 1266 GR	Q 206-208, 228	A5
00 584 48	Transistor KTD 1302	Transistor KTD 1302	Q 209-210, 213	A3
00 577 02	Transistor DTA 124 E-S	Transistor DTA 124 E-S	Q 211	A0
00 374 06	Transistor DTC 124 E-S	Transistor DTC 124 E-S	Q 212, 215, 229	A3
00 584 49	Transistor KTC 3205 Y	Transistor KTC 3205 Y	Q 216	A3
00 249 59	Transistor 2 SK 246 GR FET	Transistor 2 SK 246 GR FET	Q 226	A5
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 1-4, 7, 12	A4
00 406 79	Zenerdiode MTZ 6,2 V	Zenerdiode MTZ 6.2 V	D 5	A1
00 060 40	Zenerdiode MTZ 5,6 V	Zenerdiode MTZ 5.6 V	D 6	A3
00 380 37	Zenerdiode MTZ 33 V	Zenerdiode MTZ 33 V	D 11	A1
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 18	A4
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 201-204	A2
00 652 42	Diode 1 SV 149 B	Diode 1 SV 149 B	D 207-210	A7
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 213, 216, 223	A2
00 377 59	Zenerdiode MTZ 9,1 V	Zenerdiode MTZ 9.1 V	D 217	A2
00 032 11	Diode 1 N 4004	Diode 1 N 4004	D 218-220	A4
00 667 73	Diode 1 SS 131	Diode 1 SS 131	D 222	A2
01 037 22	Widerstands-Netzwerk 100K x 14	Network resistor 100K x 14	NR 1-2	A3
12 917 79	Sicherungswiderstand 1R ½W	Fuse resistor 1R ½W	FR 1-3	A1
00 101 81	Schichtwiderstand 220R ½W	Resistor 220R ½W	R 49	A1
00 486 38	Schichtwiderstand 1K5 ½W	Resistor 1K5 ½W	R 53	A1
00 101 82	Schichtwiderstand 1K ½W	Resistor 1K ½W	R 54	A0
00 101 81	Schichtwiderstand 220R ½W	Resistor 220R ½W	R 408	A0
00 374 43	Trimmpoti 10K	Semi fixed resistor 10K	SV 201	A3
00 296 22	Trimmpoti 22K	Semi fixed resistor 22K	SV 202	A3
00 296 20	Trimmpoti 4K7	Semi fixed resistor 4K7	SV 203	A3
12 923 70	Elko rad. 1F/5,5V klein	Elko 1F/5.5V	C 500	D0
00 652 45	Keramikfilter CSB 456 F18	Ceramic filter CSB 456 F18	X1	A4
00 370 79	Keramikschwingkreis CSA 4,0 MHz	Resonator CSA 4,0 MHz	X2	A9
01 037 23	Keramikschwingkreis CST 12,0 MTW	Resonator CST 12.0 MTW-TF01	X 4	A4
01 032 56	Quarz 32,768 kHz (Stift)	Crystal 32.768 kHz	X 5	A8
00 483 78	Quarz 7,2 MHz	Crystal 7.2 MHz	X 201	B0
00 388 05	Keramikfilter 10,7 MJA 10	Ceramic filter 10.7 MJA 10	CF 201-202	A7
00 652 43	Keramikfilter SFH 450 B	Ceramic filter SFH 450 B	CF 203	A3
00 652 45	Keramikfilter CSB 456 F18	Ceramic filter CSB 456 F18	CF 204	A4

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
12 926 10	Spule AAT 035-1 MW (AM Antenne)	Coil AAT 035-1 MW (AM ANT)	T 201	A4
12 926 11	Spule AAT 030-1	Coil AAT 030-1	T 202	A3
00 584 57	Spule AAO 024 MW (AM Oszillator)	Coil AAO 024 MW (AM OSC)	T 203	A4
12 912 30	Spule AAO 025	Coil AAO 025	T 204	A2
01 037 24	Spule AAA-014B (AM ZF-Transf.)	Coil AAA-014B (AM IFT)	T 205	A4
01 037 25	Spule AFD 014 (FM Demodulator)	Coil AFD 014 (FM DET)	T 206	A4
00 584 54	Spule AFL 002	Coil AFL 002	T 207	A4
12 919 64	Spule AMA-001A 19 kHz (Multiplexer)	Coil AMA-001A 19 kHz (MPX)	T 208-209	A6
01 037 26	Netztrafo TT 990 A48-262Y-V	Power transformer TT 990 A48-..	PT 1	C4
01 037 13	Taster EVQ 21505R-K	Tact switch EVQ 21505R-K	SW 1-12	A0
01 037 27	Taster SKH HLM	Tact switch SKH HLM	SW 13	A1
01 037 28	Display Tuner	Display tuner	VFD 1	D6
01 037 57	Klinkenbuchse 3,5 mm 2-fach grün	Socket RCA 3.5 mm green	JK 1, 2, 4	A8
01 037 53	Cinchbuchse 2-fach steh. rot/weis	Socket RCA 2 pin red/white	JK 3	A4
00 584 61	Antennenanschluß kpl.	Terminal antenna	TE 201	A4
01 037 29	Tuner KCF-205V	Tuner KCF-205V	FE 201	C6

Ersatzteilliste Lautsprecherbox MSC 330 LS
Spare parts list speaker box MSC 330 LS

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
00 750 90	Lautsprecherbox MSC 330 LS kpl.	Speaker box MSC 330 LS ass'y		E0
01 037 70	Bespannrahmen kpl.	Net frame ass'y		C3
01 037 87	Lautsprecher HT CT 40 N01	Speaker Tweeter		B0
01 037 88	Lautsprecher MT CT 66 F03 (T)	Speaker mid range		B4
01 037 89	Lautsprecher TT TAU 16 W 04020	Woofer		C3
01 037 90	Blende Hochtöner	TW decoration		A6
01 037 91	Blende Mitteltöner	Mid decoration		A7
01 037 92	Blende Tieftöner	Woofer decoration		B1
01 037 93	Anschlußterminal 2-fach	Terminal speaker		A5

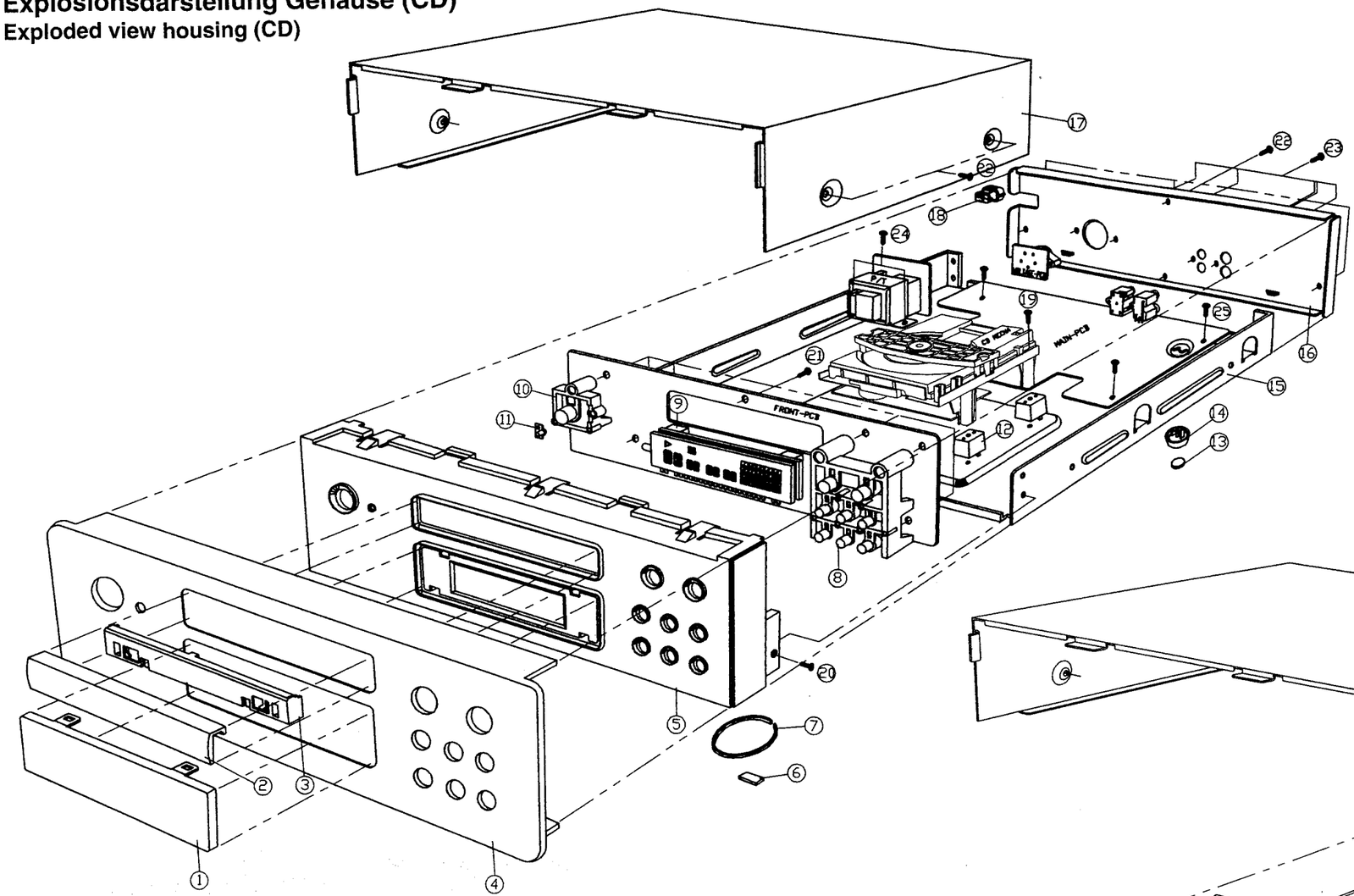
Ersatzteilliste Gehäuseteile – CD Spieler MSC 330 CD
Spare parts list housing parts – CD player MSC 330 CD

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 036 96	Metallblende MSC 330 CD	Panel front (AL)	4	D0
01 037 43	Frontblende Kunststoff (CD)	Panel sub	5	B8
01 037 44	Fenster Display	Window FLT	1	A7
01 036 97	Metallblende Slider	Cap door	2	B7
01 037 45	Sliderblende Kunststoff	Frame door	3	A4
01 022 90	Taste Power	Knob power	10	A2
01 022 91	LED-Fenster Power 1-fach	Lens power	11	A0
01 037 17	Tastenblock CD-Funkt. (8)	Knob function	8	A4
01 037 35	Gehäuseoberteil	Chassis top	17	C8
01 022 96	Metallring Gehäusefuß vorn	Ring foot front	7	A1
01 022 97	Gehäusefuß hinten	Foot	14	A0
12 268 17	NF-Cinch-Kabel 2-pol. 600 mm	Wire 2 pin 600 mm red/white	Beipack (1)	B6

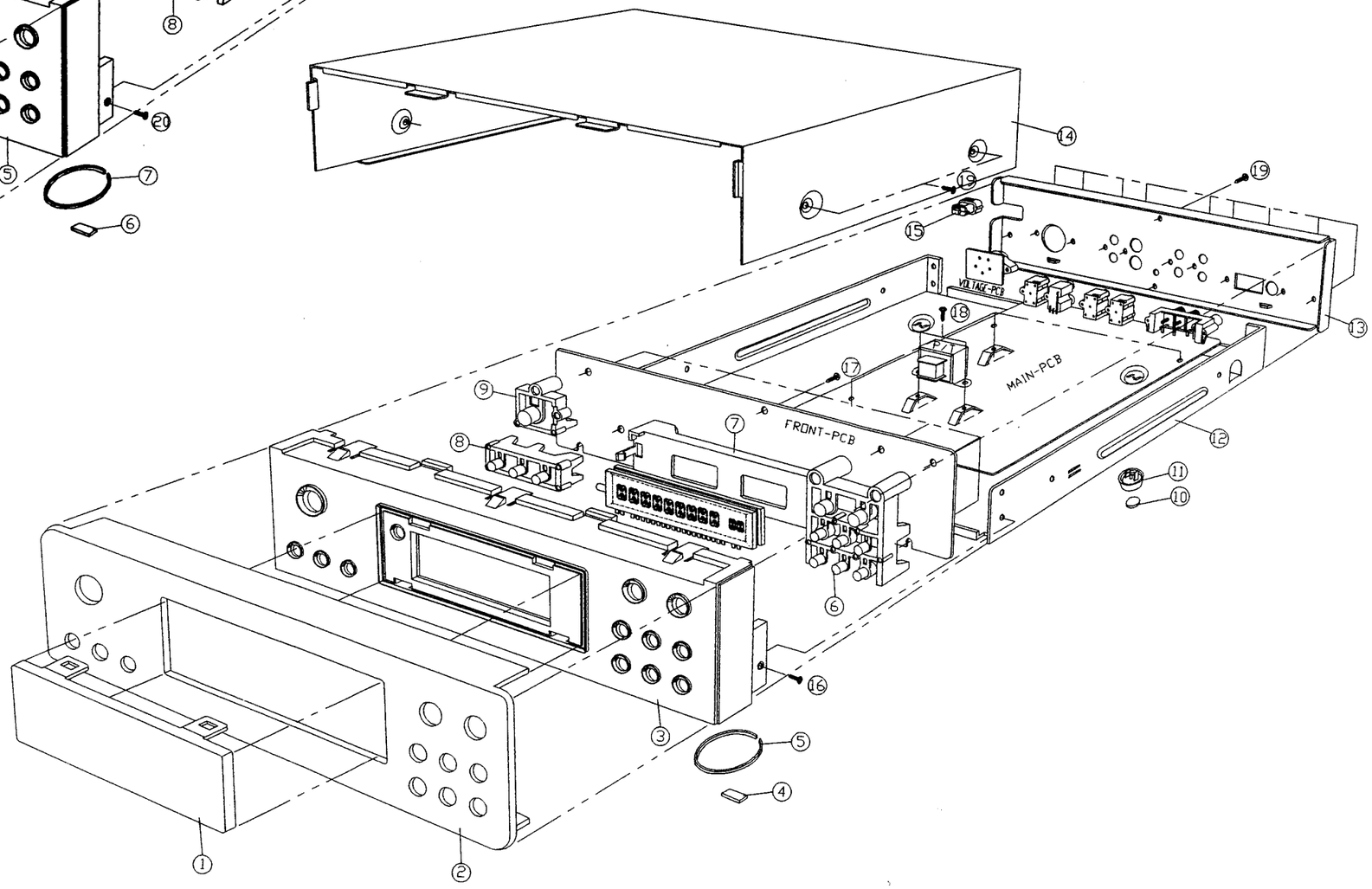
Ersatzteilliste Gehäuseteile – Tuner MSC 330 RT
Spare parts list housing parts – tuner MSC 330 RT

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 036 95	Metallblende MSC 330 RT	Panel front (AL)	2	D0
01 037 14	Frontblende Kunststoff (RT)	Panel sub	3	B8
01 037 15	Fenster Display	Window FLT	1	A7
01 022 90	Taste Power	Knob power	9	A2
01 037 16	Tastenblock RDS (3)	Knob selector	8	A2
01 037 17	Tastenblock Tuning etc. (8)	Knob function	6	A4
01 037 18	Gehäuseoberteil	Chassis top	14	C4
01 022 96	Metallring Gehäusefuß vorn	Ring foot front	5	A1
01 022 97	Gehäusefuß hinten	Foot	11	A0
01 037 19	Fernbedienungsgeber RC 135	Remote control unit RC 135	Beipack	D2
01 034 22	Bedienungsanleitung MSC 330	Instruction manual MSC 330	Beipack	B2
12 919 14	Rahmenantenne	Antenna loop	Beipack	B0
12 877 65	Wurfantenne	Antenna wire	Beipack	A5
12 268 17	NF-Cinch-Kabel 2-pol. 580 mm	Wire 2 pin 580 mm red/white	Beipack (1)	B6
01 037 20	Kabel 2-pol 2 x 3,5-Klinkenst.	Cord phone 2 pin 940 mm	Beipack (5)	A8

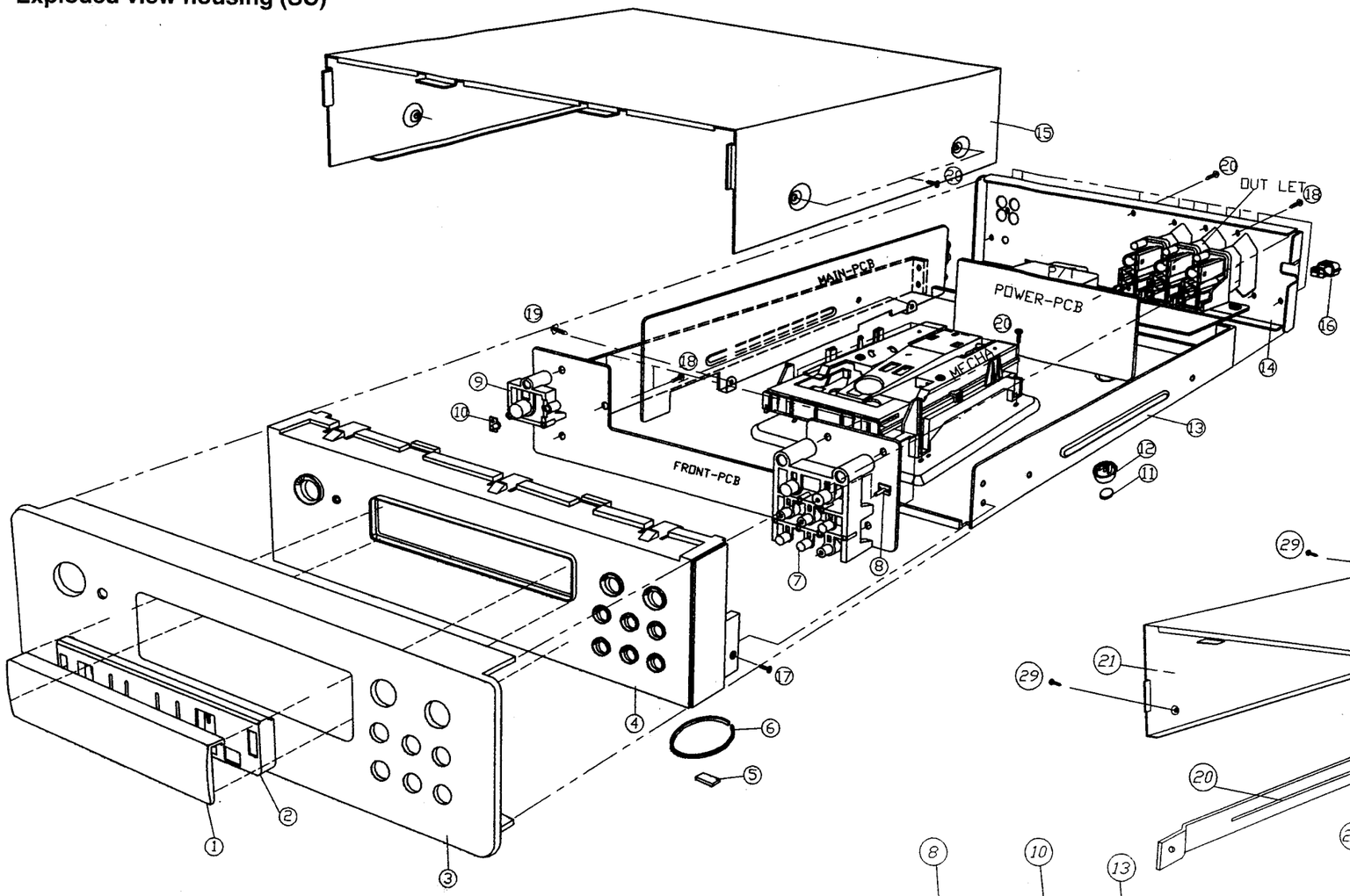
Explosionsdarstellung Gehäuse (CD)
Exploded view housing (CD)



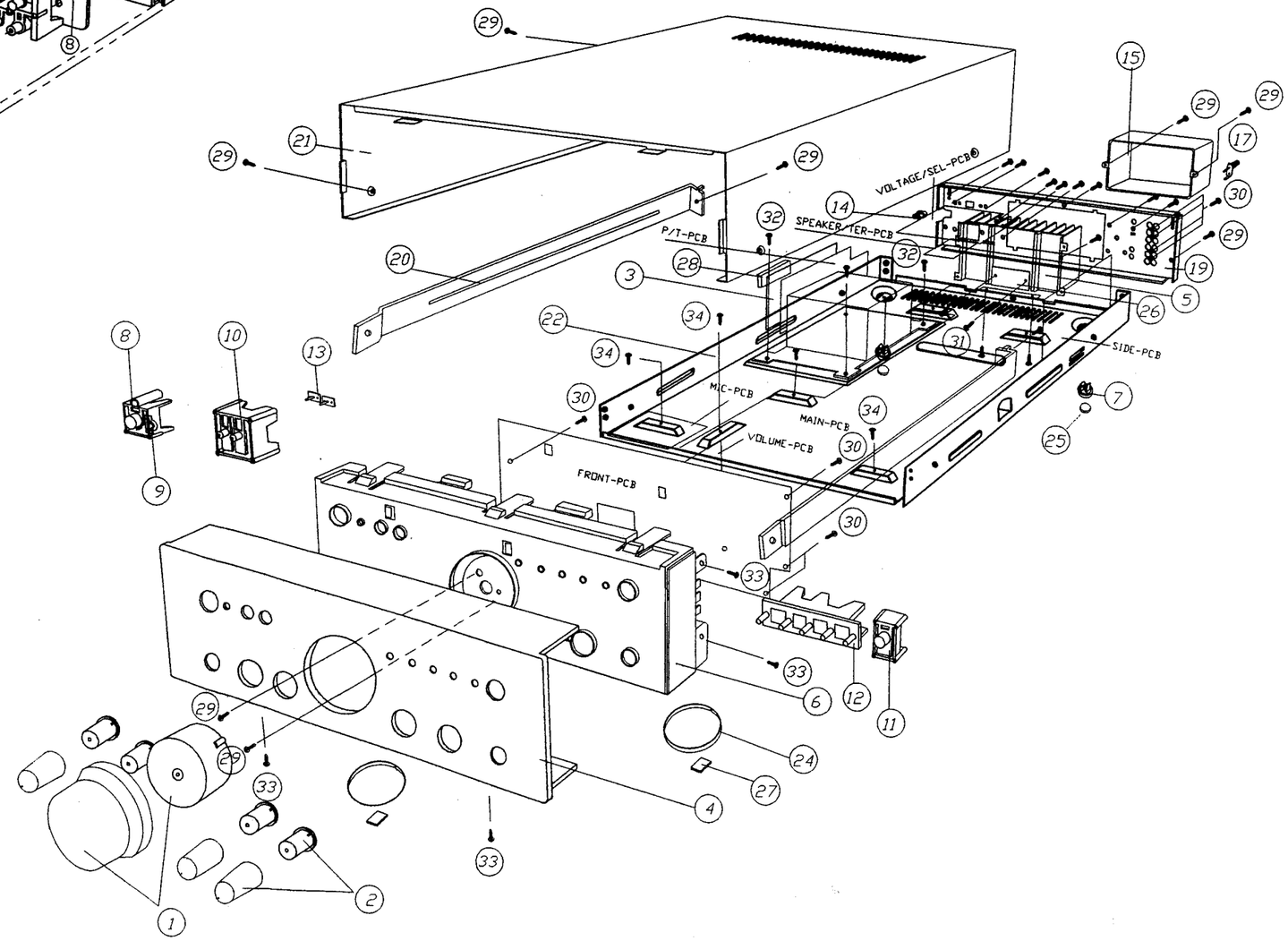
Explosionsdarstellung Gehäuse (RT)
Exploded view housing (RT)



Explosionsdarstellung Gehäuse (SC)
Exploded view housing (SC)



Explosionsdarstellung Gehäuse (PA)
Exploded view housing (PA)



Ersatzteilliste Gehäuseteile – Cassettendeck MSC 330 SC
Spare parts list housing parts – cassette deck MSC 330 SC

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 036 98	Metallblende MSC 330 SC	Panel front (AL)	3	D1
01 037 31	Frontblende Kunststoff (SC)	Panel sub	4	B7
01 036 99	Metallblende Slider	Cap door	1	C0
01 037 32	Sliderblende Kunststoff	Frame door	2	A3
01 022 90	Taste Power	Knob power	9	A2
01 022 91	LED-Fenster Power 1-fach	Lens power	10	A0
01 037 33	Tastenblock Cass.-Funkt. (8)	Knob function	7	A4
01 037 34	LED-Fenster Funkt. 1-fach	Lens function	8	A0
01 037 35	Gehäuseoberteil	Chassis top	15	C8
01 022 96	Metallring Gehäusefuß vorn	Ring foot front	6	A1
01 022 97	Gehäusefuß hinten	Foot	12	A0
12 268 17	NF-Cinch-Kabel 2-pol. 580 mm	Wire 2 pin 580 mm red/white	Beipack (2)	B6

Ersatzteilliste Gehäuseteile – Verstärker MSC 330 PA
Spare parts list housing parts – amplifier MSC 330 PA

Best.-Nr. Part.-No.	Bezeichnung	Description	Pos.	Preisgruppe Price key
01 037 00	Metallblende MSC 330 PA	Panel front (AL)	4	D1
01 022 88	Frontblende Kunststoff (PA)	Panel sub	6	B8
01 037 01	Drehknopf 47 mm Lautstärke	Knob volume ass'y	1	C0
01 022 89	Drehknopf 12 mm (4)	Knob balance ass'y	2	B1
01 022 90	Taste Power	Knob power	8	A2
01 022 91	LED-Fenster Power 1-fach	Lens power	9	A0
01 022 92	Taste Input Select	Knob selector	11	A2
01 022 93	LED-Fenster Input 5-fach	Lens selector	12	A0
01 022 94	Gehäuseoberteil	Chassis top	21	C5
01 022 95	Abdeckung Kühlblech	Cover radiator	15	A6
01 022 96	Metallring Gehäusefuß vorn	Ring foot front	24	A1
01 022 97	Gehäusefuß hinten	Foot	7	A0
01 022 98	Anschlußschraube Masse (GND)	Terminal GND	17	A2

WICHTIGER HINWEIS/IMPORTANT NOTE

Der integrierte CD-Spieler arbeitet mit unsichtbarem Laserlicht.
Nicht in den Strahl blicken und sich nicht dem Strahl aussetzen!
Vorsicht, Laserstrahlung im Inneren des Gerätes!
Zur Vermeidung von Strahlungsschäden darf das Gehäuse nur von qualifiziertem Fachpersonal geöffnet werden.
Informationsetikett auf der Geräterückseite (siehe Bild).

LASER KLASSE 1

Laser $\lambda = 780$ nm, $P_{max} = 0{,}5$ mW

Warnetikett in dem Plattenfach (siehe Bild).

UNSICHTBARE LASERSTRAHLUNG NICHT DEM STRAHL AUSSETZEN LASER KLASSE 3 B

The integrated CD-Player works with invisible laser-light.
Do not look into this beam and don't abandon yourself to radiation.
Attention, laser-radiation also inside of the unit!
To avoid damages of radiation unit should be opened only by qualified service personnel.
Information label on the rear of unit (see picture).

CLASS 1 LASER PRODUCT

Laser $\lambda = 780$ nm, $P_{max} = 0{,}5$ mW

Warning label in record-drawer (see picture).

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

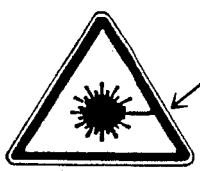
VAROITUS!
Suojakoteloa ei saa avata. Laite sisältää laserdiodin, joda lähettää näkymäntöntä silmille vaarallista lasersäteilyä.

VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

ADVARSAL:
Usynlig laserstråling ve åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



Austrittsöffnung für Laserstrahlung
Discharge orifice for Laser radiation

Hinweis für Original-Etikett:
Schrift und Umrandung schwarz, Untergrund gelb.

Indication for original label:
Letters and surrounding black, background yellow.

Bitte bei Ersatzteilbestellung die genaue Bezeichnung und **Ident-Nr. (siehe Typenschild)** des Gerätes sowie Bestell-Nummer und Positions-Nummer des Ersatzteils angeben.

For ordering of spare parts please state exact description and **ident.-no. of unit (see silver rating label on the backside of unit)** as well as part no. and position no. of required spare parts.

Der Umwelt zuliebe!

Diese Serviceanweisung wurde auf chlorfrei gebleichtem Papier gedruckt.

Working for the environment!

This service manual is printed on paper whitened without chlorine.

Technische Änderungen vorbehalten.
Technical modifications reserved.